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THE CHEMIST AND DRUGGIST is supplied regularly to every member of the following Societies:—

Pharmaceutical Society of Ireland.
 South African Pharmaceutical Association.
 Pharmaceutical Society of Natal.
 Central Pharmaceutical Association of N.Z.
 Otago Pharmaceutical Association.
 Pharmaceutical Society of Queensland.
 Pharmaceutical Society of South Australia.
 Pharmaceutical Society of Western Australia.

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BOOKS FOR THE TRADE.

ALL chemists and druggists and their assistants should have the following books in their libraries for reference:—

- "The Art of Dispensing." 3s. 6d.
 "Veterinary Counter-Practice." 3s. 6d.
 "Handybook of Medicine-stamp Duty," by E. N. Alpe, barrister, Somerset House. 2s. 6d.
 "Pharmaceutical Testing," by B. S. Proctor. 2s. 6d.
 "Pharmacy and Poison Laws of the United Kingdom." 2s. 6d.
 "Guide to the Pharmaceutical Preliminary Examination," by W. Dodds 2s. 6d.

The books can be obtained from most wholesale houses, or we can send either of them by post for 3d. extra. ("The Art of Dispensing" is 3s. 10d. by post.) They are the best books of the kind published.

Summary.

MR. LINLEY SAMBOURNE has lent his graphic pen to the Apollinaris Company, and we give one of his sketches on p. 188.

EDINBURGH chemists have discussed the ownership of the prescription, and have left the matter very much where it was (p. 185).

It will be observed, from a paragraph on p. 195, that the next pharmaceutical evening meeting, to be held on February 11, will be of exceptional interest.

MR. W. L. CURRIE has, before the Glasgow Association approved of Mr. Carteighe's presidential remarks regarding unqualified managers of branch shops (p. 182).

THE death of Mr. John Banks, who has for many years been at the head of Messrs. S. Maw, Son & Thompson's surgical instruments department, is reported (p. 196).

THE Grocers' Association are not pleased at the prosecutions for the sale of articles containing a trace of poison, and are calling the attention of the Privy Council to the matter (p. 178).

THE report of prosecutions under the Sale of Food and Drugs Act deal with a proposed appeal in the Ealing seidlitz-powder case, which was granted after some consideration by the Magistrates (p. 187).

THE social board has been attracting several sections of the drug-trade during the past week. On pages 178 and 179 we report a number of meetings, and others are referred to under the Winter Session (p. 181).

A PERFUMERY company has been fined for not giving notice to the inspector under the Factory Acts of the opening of a new factory, and for employing women overtime more frequently than the law allows (p. 188).

THE prescribing of proprietary articles is vexing Edinburgh and Glasgow chemists just now, if we may judge from the reports that we have received, and which put the matter strongly from the trade point of view (p. 183).

THE Chemical Society signified their appreciation of the late Professor Helmholtz's services to science by a memorial lecture delivered by Professor Fitzgerald, of Dublin, who disputed the correctness of several conclusions by chemists, notably the vortex atomic and ionisation theories (p. 198.)

ANTICUTTING bulks largely in the present issue. A meeting of The Proprietary Articles Trades Association for preventing cutting was held in London on Wednesday, and is fully reported on p. 192, some comments of our own being added on p. 192, while Mr. John Thompson, of Maw's, talks to us on the subject (p. 197), and several letters are printed in our Correspondence section (p. 205).

WE report a decision of the High Court requiring analysts to state in their certificates the data upon which they base their opinion of adulteration, and not make simply such assertions as in the case of milk—"contains 5 per cent. of added water." In another adulteration case the Magistrate dismissed the summons because it did not show that the alleged offence was to the prejudice of the customer (p. 187).

WE deal very fully in our editorial columns with the origin and properties of Röntgen's light-rays, the article being illustrated with a shadow-photograph showing the bones of the hand embodied in the flesh. As an appendix to the article there are some notes of the proceedings at the Paris Academy of Sciences this week, at which it was agreed to speak of the new light as "Röntgen's rays" (p. 193).

THE drug and chemical markets have not been very active this week. The chief change we have to report is a considerable decline in raw camphor, although at the close that erratic article is looking up again. In fine chemicals a large drop has taken place in pilocarpine; spices are dull; the prices of oils are generally tending higher. A price-list, in table-form, giving the quotations of sundry fine chemicals will be found in our trade report (p. 200).



English News

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Institute of Chemistry.

At the examination for admission to the membership of the Institute held from January 7 to 10, the following candidates were successful:—G. H. App'eyard, Yorkshire College, Leeds; J. H. Coste, Finsbury Technical College; G. George, Merchant Venturers' Technical College, Bristol; F. Hudson Cox, School of the Pharmaceutical Society and University College, London; P. C. H. Hunt, Mason College, Birmingham; and E. J. Parry, B.Sc. (London) Gny's Hospital. Of the candidates for the Intermediate examination the following satisfied the examiners:—P. G. Jackson, University College, Nottingham; E. J. Read, B.A. (Cantab); and H. S. Shrewsbury, University College, Nottingham. The examiners were Professor W. R. Dunstan and Mr. Otto Hehner. The members of the Institute now number over 900, and there are over 200 registered students.

Lung-ionic Buildings

A formal inauguration of the extensive new works recently built by Mr. W. T. Owbridge, "Owbridge's Lung-ionic," in Osborne Street, Hull, took place on January 23, in the presence of a number of local gentlemen. The premises, which are at present only half completed, will when finished have cost nearly 6,000*l.*, and are admirably adapted to the business purposes required. After a tour of inspection the company reassembled in the handsome offices, where there were present Aldermen Rayment and Rolit, Councillors Robson, E. Laverack, and J. Shaw, P. Owbridge, W. Hay (Wm. Hay (Limited), J. A. Duesbury (postmaster), Rev. H. P. Ramsden, &c. In supporting the toast of "Mr. Owbridge," Alderman Rayment paid high compliment to Mr. Owbridge's industry, and expressed the hope that next year he might be Sheriff of Hull. In acknowledging the toast Mr. Owbridge spoke of the progress made by his business and said that with the increased facilities they could now turn out a hundred gross per day. He had worked hard to make the business a success, and he was glad to feel that he had succeeded. The secret of it lay in judicious advertising. Where fifty started, perhaps only one succeeded, and he was the one who had had the courage to stick at it. Advertising was like casting so much bread upon the waters. The return would come, though it might be at the end of many days.

Adulteration and Publicity.

The Camberwell Vestry, after considering the arguments adduced by delegates from the Dairy Trade and Can Protection Society and the Metropolitan Grocers and Provision-dealers' Association, have resolved by 49 to 19 votes to continue to act on their resolution passed a short time ago to the effect that "convictions of offenders under the Sale of Food and Drugs Acts, 1875 and 1879, be, after the second conviction, published on the Vestry notice-boards, the depôts, and on the other public buildings, &c., belonging to the parish." The Associations named argued that the Vestry had no legal power to impose a second punishment on tradesmen who might from no fault of their own be convicted and fined. It transpired, however, that the Vestry had taken the advice of eminent counsel, who said:—"If in the judgment of the Vestry the publication of these convictions is necessary for the protection of the parishioners, the Vestry may safely publish them as suggested," and the majority of the Vestry being of the opinion that sufficient publicity could not be otherwise obtained—many adulteration cases were never reported in local newspapers, for various reasons, but mainly because the offenders exerted themselves to secure the suppression of the report—it was resolved to publish particulars of second offences by placards.

Assault on a Chemist.

Mr. H. Loverock, chemist, Enville Street, Stourbridge, was going round his premises shortly before ten o'clock on January 23, when he saw a man minus shoes crouching behind a large packing case in the hall by the shop. The man sprang up and struck Mr. Loverock on the left side of the face with some iron instrument, believed to be a brick-layer's chisel. He followed the blow up. Mr. Loverock tried to defend his head by holding up the lamp to parry the blows. The lamp was knocked out of his hand, and the intruder got away through the front door. A constable chased the man, but could not come up with him, but a man believed to be the same was taken into custody later.

Grocers and the Pharmacy Act.

The Federated Grocers' Association have resolved to call the attention of the Privy Council to the action of the Pharmaceutical Society in pursuing what the Federated Grocers term—"A most unwarrantable and unfair course in prosecuting traders for selling proprietary preparations which contain only a trace of poison."

A Chemist's Company Dinner.

The employés of Day's Southern Drug Company, Southampton, held their second annual dinner at Sharp's Restaurant, on Wednesday evening, January 22, Mr. E. A. Fry, the general manager, presiding. After dinner, in proposing "The Firm and Managing Directors," Mr. A. F. Wood (Vice-Chairman) spoke of the rapidity with which the company had developed, for instead of one shop they now had upwards of thirty workshops, central offices, and depôts. He regretted exceedingly the absence of their managing director, Mr. William Day. Mr. Fry, in responding, paid a high tribute of respect to the managing director, who desired him to say how pleased he was to know that the staff had promoted a gathering of that character. The speaker referred to the enterprise of the firm, which was started by Mr. Day, and the success which had attended it. Mr. Day had been sorely taxed in his work, and it had unfortunately reacted upon his health, which they all deeply deplored. The company, he added, was not antagonistic to the interests of the retail chemist and druggist. It was started to meet the demands of the public. They had been subject to much opposition, and many erroneous statements had gained currency with respect to the intentions of the company. As regarded retail chemists and druggists, his experience had proved that instead of the latter having sustained any harm, they had been profited to a great extent.

Profit-sharing in the Aerated-water Trade.

Messrs. Idris & Co.'s employés met on January 17, some 500 in number, in response to the invitation of the directors, at the works in Camden Town, for the annual New Year's entertainment given by the firm to all their workpeople. In the earlier part of the evening the guests were regaled with a substantial tea, and this was followed by an entertainment, also of excellent quality, arranged by Mr. Maldwyn Humphreys. In the interval between the two parts of the entertainment Mr. Idris, who was supported by his co-directors, Mr. Deputy Hughes, Mr. Adpar Jones, and Mr. Bishop, made a statement in reference to the division of the profits. He said the report he had to make was more satisfactory than any previous one. They all recognised that everyone connected with the firm did more or less—some, he admitted, but little—to push forward the interests of Idris & Co., and the result of their united endeavours was that the firm had prospered very well in the past. Their last season was an exceptionally good one. They had been in the habit of distributing a number of shares to their customers, who were anxious to share in the prosperity of the firm, so good an account had Idris & Co. been able to give of themselves. Indeed, so great had been this demand for shares that there were none left. But, though they had no shares to distribute, there was nothing to prevent them from distributing a part of their profits if they cared to do so. In this distribution they had had some regard for what the employés had done with their profits in past years, for there had been some workers who, because the money was obtained easily, thought it should be spent just as easily. The firm was, therefore, prepared to take the money from

their employes; of the security there could be no question, and they would give the employes 5 per cent interest for their money—double the percentage given by the Post Office—as an inducement to the workers to continue to take an interest in the business. The firm had placed 500*l.* to the profit-sharing fund, which would be distributed to the workers, and no boy or girl who had been in the employ of the firm for twelve consecutive months would receive less than 1*l.*, while many would receive more. This statement was received with warm applause, and the very attractive musical entertainment was then completed.

Druggists' Dinner.

The employes of Messrs. Baiss Bros. & Co. held their annual dinner at the "City Arms," St. Mary Axe, on January 17. The chair was taken by Mr. Arnold Baiss, and Mr. S. C. Welch occupied the vice-chair. The company included Messrs. Sydney Baiss, W. A. Baiss, L. A. Baiss, G. G. Baiss, J. Clark, and C. Jayne, the two last-named having been connected with the firm for sixty-two and over fifty years respectively. After dinner the toast of "The Firm" was proposed by Mr. S. C. Welch, and responded to by Mr. Sydney Baiss. Songs and recitations followed, and a very pleasant evening was spent.

Light-standards.

On Wednesday evening, Mr. Dibdin, chemist to the London County Council, read an exhaustive paper at the Society of Arts on the standards of light. The paper dealt largely with the report of the Committee of the Board of Trade, which we noticed some time ago. The fact that this Committee, representing all the chief gas interests, unanimously recommended the adoption of Dibdin's pentane argand, a ten-candle power light, as the new standard of light, to replace the admittedly unsatisfactory candle, was, urged the lecturer, sufficient ground for asking for legislation. Mr. Vernon Harcourt had done some splendid work at photometry, and the Committee agreed that his one-candle pentane standard was a very reliable and constant one, but that it was best to compare a light with another more nearly approaching itself in value. In fact eight or nine reliable observers had experimented with it, and the values it gave in their hands, with one exception, lay between .99 and 1.01 candle. In our present state of knowledge it is necessary that the standard should be one of the nature of a flame using some combustible material, as experiments with electric light show that it cannot be depended. In the course of the lecture Mr. Dibdin mentioned that Professor Thorpe had prepared samples of pure isopentane from German, Scotch, and Irish kiesel oils, by careful rectification, conversion of the amyl alcohols into iodides, and reduction of the resulting amyl iodides by the copper-zinc couple. The lecturer also referred to the errors of the candle, dealing with the manufacture of the wicks, and the method of plaiting them were fully gone into.

A Jersey Druggist "en Désastre."

At the Royal Court-house of Jersey on Saturday last application was made for confirmation of a dstraint effected on chattels presumably belonging to Mr. Hubert Claude L'Aertes Brodhurst, for the payment of rent of No. 11 Halkett Place, thus:—25*l.* for three months' rent due on December 25, 1895, and 75*l.* assurance of payment for nine months' rent from that date to September 29 (payable quarterly in advance). Mr. John Le Rossignol (accountant), however, declared the estate *en désastre*, and the Court fixed the filing of claims for February 15. According to the Jersey law, by the bye, every person who has sold a portion of his property or otherwise lessened the guarantee of his creditors, can be declared *en désastre* by any of them. This *désastre* does not, however, affect the reality, if any; it merely places all the creditors on the same footing, as a day is fixed on which they file their claims against the debtor. But in the event of their neglecting to do so they forfeit their claim against his personalty, unless it realises more than a sufficient sum to pay the other creditors and the costs. Mr. Brodhurst is a young Jamaican, who, about three months since, opened, with a great flourish of trumpets, what he christened the "Halkett Drug Stores." He was formerly an auctioneer's clerk, but had succeeded to Mr. Cox's commission agency for the firms of Baiss Bros. & Co., Lynch & Co. (Limited), and

J. & E. Atkinson. It is to be presumed that his drug-store was not a success, for last week Brodhurst was missing gone to England, it was said, and was followed a few days later by his young wife and child. Their intentions appear to have been kept a profound secret, not even the dispenser, a young Englishman, being aware of how matters stood. A placard, the composition apparently of a wag, was affixed to the shop shutters stating, "The drugs are operating."

* Western Chemists' Association Smoker.

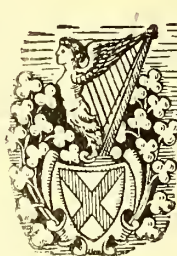
This Association had a concert at the Westbourne Restaurant, Craven Road, W., on Wednesday, January 22. Mr. Hyslop, the President of the Association, was in the chair, and between fifty and sixty members and friends were present. The Chairman scored a success with a humorous sketch, which he gave in characteristic style, and several of the other performers were asked to "oblige again." Mr. E. J. Eastes, the poison-finder, accompanied. During the interval Mr. Hyslop called the attention of the Association to the recent prosecutions under the Sale of Food and Drugs Act, regarding seidlitiz powders and white wax, and hoped that at the next monthly meeting the question would be thoroughly discussed and some way out found of the difficulty.

* Charge of Stealing a Tank.

On January 21, at the Hull Police Court, Charles Sergeant was charged on remand with stealing a tank, the property of Mr. W. Hay, wholesale chemist, Hull. It was stated that the prisoner had been in the service of the prosecutor since he was a lad, and at the time of his dismissal nine months ago was foreman of Mr. Hay's essence-factory. Some time ago prosecutor had a couple of tanks stored away, and in November last one of the tanks was missed. It was found in the possession of a relative of prisoner in Lincolnshire. Mr. Hay, in giving evidence, stated that the tank was worth between 2*l.* and 3*l.* Cross-examined: He knew prisoner had since entered the business of Boake, Roberts & Co., essence manufacturers, London. Prisoner had never asked him if he could have a tank for a relative in Lincolnshire. For the defence it was urged that there was no felonious intent. The prisoner was again remanded.

Admiralty Drug contract.

The Admiralty have renewed their contract with Messrs. John Richardson & Co., Leicester (Limited), for the supply of drugs and medicines for a further period of three years.



Irish News

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Sir James Haslett's Portrait.

Sir James H. Haslett, President of the Ulster Branch of the Chemists' and Druggists' Society of Ireland, has been presented by a number of his colleagues with a portrait of himself. The portrait is a half-length life-size one, painted in oils, and the likeness is admirable.

Anticipating Victory.

Messrs. Fannin & Co. (Limited) announced some time ago that they had engaged a pharmaceutical chemist (Mr. Samuel Smith, M.P.S.I.) "to conduct a pharmaceutical department"; it is now stated to be ready for the compounding of medical prescriptions. The new limited company apparently has no fear for the result of the pending litigation.

* Those paragraphs throughout this issue to which an asterisk is attached were printed in our supplement last week.—ED. C. & D.



Scotch News

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Edinburgh Chemists' Ball.

We are asked to state that this ball will be held in the Assembly Rooms, George Street, on Wednesday, February 5. Tickets may be obtained from Mr. Peter Boa, 119A George Street, Edinburgh, the Convener of Committee.

A Breach of Promise Case.

Intimation was made on Tuesday afternoon to Sheriff Rutherford in the Edinburgh Sheriff Court, that the action by Agnes Burton, 26 India Place, Edinburgh, against John S. Henderson, chemist's assistant, 5 Pepper Bank, Craigmillar, Edinburgh, for payment of 250*l.* as damages for breach of promise of marriage, had been settled. The terms of the joint-minute between the parties was given effect to by the Sheriff, but the exact conditions were not intimated. The agent for the defender in the case took exception to the practice of permitting newspaper reporters to obtain access to the process in the hands of the Sheriff-clerk. He said that in the case before his Lordship the facts connected with it would not have been made public but for this practice. On behalf of his client he objected to the publication of the information as being hurtful to his feelings. He did not make any complaint against the officials in the Sheriff-clerk's office; they had followed the usual practice, but it would be well that the Sheriff should give a ruling on the point whether the press were entitled to see, and the Sheriff-clerk bound to exhibit to them, the documents in process before that Court. The Sheriff said he would consult his colleagues before giving an opinion on the point raised.

A New Branch.

Mr. Edward Brindle, chemist and druggist, Morrison Street, Edinburgh, is about to open another shop in Haymarket Terrace, Edinburgh.

Chemists' "At Home."

The Inverness Chemists' Assistants' and Apprentices' Association held their first annual "At Home" in the Palace Hotel, Inverness, on January 24. Mr. Lewis McLeod, chemist, presided at the concert preceding the dance, and acted in a similar capacity at the supper, which was served shortly after midnight. The attendance of ladies and gentlemen was large, and the meeting was a decided success. The Secretary for the arrangements was Mr. J. Michie.

French News.

(From our Paris Correspondent.)

THE PARIS CHEMICAL SOCIETY.—M. Henri Moissan has been elected president, and MM. Sauret and Riban, vice-presidents of this Society, which now numbers eleven hundred members.

RAPID TREATMENT OF MORPHINOMANIA.—At the last meeting of the Paris Academy of Medicine, M. Laborde discussed the results obtained by Dr. Paul Sollier at Paris from the Erlenmayer or "rapid" treatment of morphinomaniacs. The statistics adduced cover three years (1892–1894), and are very favourable for the system. It is claimed for it that it does away, on the one hand, with the chance of mortal accidents and the violent pains that accompany the "sudden" method, and that, on the other hand, it is invariably successful in weaning the patient from the mania, of which one is never certain with the "slow" treatment;

relapses are reduced to a fraction of their usual number, and the whole time required for the cure and convalescence does not exceed, on the average, two months. The cases treated by Dr. Sollier number 57, including 15 doctors, a medical student, a dispensing chemist, and 24 women, of ages varying between 19 and 65. The average time required for the suppression of the habit was four days, and out of 33 who have been watched since, six only have relapsed. In addition, out of 11 morphiomaniacs who had relapsed after treatment by the "slow" method, one only relapsed a second time after treatment under Dr. Sollier. It seems indispensable for the success of the "rapid" method that the patient should pass a period of convalescence in a special establishment for the purpose, such as exists in Germany.

TONKIN OPIUM FARM.—Search warrants were executed last Monday at the town and country residences of M. Alfred Edwards, formerly editor of the *Matin* newspaper. A shadow of the coming event was cast a few days before, by a passage in a speech made by M. Mareel Habert, during the debate at the Chamber of Deputies on a Bill for raising a loan of fifty million francs for Tonkin. Referring to the concession for the opium farm, he mentioned that it had been given to a M. de Saint Mathurin, who had become proprietor of a Paris newspaper, and since that time the company working the opium farm had been without control. They had also proceeded to collect such evidence as was available concerning the defects of the Colonial administration, and commenced newspaper attacks and threatened a lawsuit for damages. M. de Lanessan, the Governor of the Colony, then in office, seems to have been intimidated by these proceedings, and in September 1891, he agreed to pay the company a sum of 400,000 f. out of the amount received from the company for the original monopoly, at the same time giving a further monopoly for eight years from January 1, 1892, for the opium farm in Annam. Finally in May 1893, he bought back the monopoly for Tonkin against an indemnity of 3,400,000 f., which represented more than two and a half times the capital of the company. "This," said M. Habert, "is the history of the opium farm. M. de Saint Mathurin only obtained the monopoly in order to sell it for twice the sum by the methods I have pointed out."

Foreign and Colonial News.

BOXES AND CARTAGE.—The wholesalers of the eastern part of the United States have failed to agree in regard to the charge for boxes and cartage, so retailers will continue to get these free.

A MEXICAN EXHIBITION.—It is said that the National Mexican Exhibition, which will be opened this spring, is likely to be very successful. Many European (especially German) and United States firms will be represented. The show will cover about 600 acres.

TESTING THE ILLINOIS PHARMACY LAW.—About fifty druggists of Chicago are being prosecuted by the Illinois State Board of Pharmacy for violation of the Pharmacy Law, says the *Bulletin of Pharmacy*. The charge is that they do not display the names of the registered pharmacists in charge of the respective stores, and that in many instances the stores have been left in the sole charge of persons not registered, during the absence of the manager or proprietor. The unusually large number of prosecutions now entered against the Chicago druggists is attributed to the fact that most of the druggists are unaware of the recent changes in the law.

A BIG WHOLESALE DRUG-HOUSE.—The Meyer Brothers Drug Company, of St. Louis, Mo., is stated by the *Mercantile and Financial Times* to be the largest drug-house in the world, and employs a capital of \$1,750,000. By "drug-house" the *Times* means "wholesale druggists" a term applied in the United States to those who handle drugs and chemicals and all manufactured products, but do not themselves manufacture much. In this class the company unquestionably stands at the head, and the premises occupied in St. Louis are colossal. The house has customers in every State and Territory between Ohio and the Pacific coast, and

the management is vested in Christian F. G. Meyer, President; Theodore F. Meyer, First Vice-President; Chas. W. Wall, Treasurer; Gustav J. Meyer, Secretary.

AN INDIAN PHARMACOPOEIA—Writing to the *Indian Lancet* Mr. David Hooper, Madras quinologist, traces the history of the now obsolete Indian Pharmacopœia, and gives no hope of its revival. He suggests that "the question of the strength of medicinal plants grown in different climates should be considered by the Indigenous Drug Committee now sitting in Calcutta. The committee should definitely recommend to the authorities on the General Medical Council in London the necessary substances to be included in the next Pharmacopœia, and should suggest the best methods for adapting it to India. The committee will do good work in encouraging the cultivation of medicinal plants indigenous to India; but what is more required is the cultivation of drugs official in European Pharmacopœias, the properties of which have been thoroughly investigated by modern physiologists. The drugs used at the medical depôts need not all be official, provided that those of real value are substituted; picrorrhiza-root is an excellent remedy, for instance, in the absence of gentian-root."

INDIAN DRUGS.—Having been appealed to by the Indian Medical Congress to encourage the more extensive use of Indian remedies, the Government of India have considered the matter, and are not at present convinced of the desirability of initiating as a Government measure experiments to test the reputed therapeutic value of indigenous drugs. But the Government have appointed a committee to consider the whole question in a practical way. This committee consists of Brigade-Surgeon-Lieutenant-Colonel G. King, C.I.E., Superintendent of the Royal Botanical Garden, Howrah (President); Surgeon-Lieutenant-Colonel J. F. P. McConnell, Professor of Materia Medica and Clinical Medicine, Calcutta; Dr. George Watt, Surgeon-Lieutenant-Colonel C. J. Warden, and Rai Bahadoor Kanny Lal Dey. The committee will consider the practicability as well as the utility of (a) encouraging the systematic cultivation of medicinal plants indigenous to India; (b) encouraging the increased use in medical depôts of drugs of known therapeutic value; and (c) sanctioning the manufacture of stable preparations of certain drugs at the depôts. The committee will also consider, from a practical point of view, the question of initiating, as a Government measure, experiments to test the reputed therapeutic value of indigenous drugs. The committee meets at Calcutta.

New Books.

Archer, A. H. *Practical Veterinary Advice for Stockowners*. Cr. 8vo. Pp. 84. Limp. 1s. 6d. (Vinton.)

Bayley, R. C. *Modern Magic-lanterns: A Guide to the Management of the Optical Lantern, for the use of Entertainers, Lecturers, Photographers, Teachers, and others*. Illustrated. Cr. 8vo. Pp. 108. Sewn. 1s. (L. U. Gill.)

Blogg, John K. *Scut-plant Farming*. Pp. 55. 24mo. Paper covers. Republished from *The Australasian*. (Blogg Brothers, Melbourne.)

Dierr, G., and Turnbull, W. *Bleaching and Calico-printing: A Practical Manual*. With Diagrams and Dyed and Printed Patterns. 8vo. Pp. 154 and pattern-sheets. 12s. 6d. (Griffin.)

Medical Directory for 1896: including the London Medical Directory, the Provincial Medical Directory, the Medical Directory for Wales, the Medical Directory for Scotland, the Medical Directory for Ireland, the Medical Directory of Registered Practitioners resident Abroad; the Medical Directory of the Naval, Military, and Indian Services; Licentiates in Dental Surgery; also Statistical and General Information of the Universities, Colleges, Schools, Hospitals, Dispensaries, Lunatic Asylums, Societies, Sanitary Medical Service, Public Services, &c. 8vo. Pp. 1,824. 14s. (Churchill.)

Pocock, J. *The Brewing of Non-excisable Beers*. Illustrated. Cr. 8vo. Pp. 68. 2s. 6d. (Simpkin.)

Purdy, Charles W., M.D. *Practical Urinalysis and Urinary Diagnosis: a Manual for the use of Physicians, Surgeons, and Students*. 2nd edit. Crown 8vo. Pp. 360. Cloth. \$2.50 net. (Philadelphia: The F. A. Davis Company.)

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The Winter Session.

BRIGHTON JUNIOR ASSOCIATION OF PHARMACY.

THE first social and musical evening of the winter session took place at Newburg Hall on Wednesday, January 22. Mr. W. H. Gibson (President of the Senior Association) took the chair. There was an unusually large attendance, and an interesting programme was well performed.

CHEMISTS' ASSISTANTS' ASSOCIATION.

AT the meeting of this Association held on January 23, Mr. H. JULER, F.R.C.S., the well-known ophthalmic surgeon, gave an interesting paper on "The Action of Certain Drugs on the Human Eye," which was profusely illustrated with diagrams and lantern-slides. The lecturer first described the eye in its normal state, and referred to the action of cocaine and alkaloids of the atropine series on the various nerves, muscles, &c. He explained the physiological functions of the nerve-system and the various glands, laying considerable stress on the blood-supply. Dr. Juler also alluded to a recent research undertaken to explain how the image formed on the retina by the action of light is transferred to the brain, which, as he demonstrated, is due to an electrochemical action developed by the action of light on the optic nerve. In conclusion he explained a series of diagrams of a pathological nature which were displayed by the oxy-hydrogen light.

Thanks to the kindness of Professor Green the Secretary had the loan of twelve microscopes, by the aid of which Dr. Juler was able to exhibit a series of micro objects illustrative of the tissues of the eye.

In connection with this Association the second of a series of Cinderella dances given by them was held at the Portman Rooms, Baker Street, on Tuesday, January 28. The attendance was rather larger than the previous gathering. A good number of well-known pharmaceutical men and their wives were present. Dancing commenced punctually at eight, and was continued until midnight; the programme included sixteen dances, in addition to which there were several extras. Mr. C. W. Martin acted as M.C., whilst the arrangements were carried out in a successful manner by Mr. H. H. Robins, who is acting as secretary for the series. One of the remarkable features of the evening was that the gentler sex predominated, which is not usually the case at the functions of the C.A.A.

EDINBURGH CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

AT the meeting held on Friday, January 24, Mr. J. R. HILL read a paper on

THE IRREDUCIBLE MINIMUM: A STUDY. By ALEXANDER SUTHERLAND.

The paper was a fanciful sketch of the business of the pharmacist viewed from the professional standpoint, and chiefly in regard to the examinations which are required to be passed in order to qualify as a chemist and druggist or pharmaceutical chemist. The author showed that in the actual practice of pharmacy a great deal is required which is beyond the examination subjects, and that the chemist, to be a success, must be able to answer certain questions promptly and well. As an example of this he quoted the following questions, actually put to a chemist.

Imperative questions:—

1. Who were these (pointing to Galen and Avicenna on a Major certificate)?
2. What is the meaning of the word "Tincture"?
3. What is ichthyol, and what is it made from?
4. Where does vanilla come from?
5. At what temperature does crude carbolic acid distil?
6. Why do people call the coca-plant *Erythroxylon coca*, and what does that mean?
7. Why have I to pay more here for Epsom salts than I have to pay at the grocer's?
8. How much of this (subnitrate of bismuth) may I take without harm?

9. What is tuberculin?
 10. Do doctors make many mistakes in writing out prescriptions?

Optional questions:—

1. Who is the King of China just now?
2. Can you tell me the sex of this canary?
3. What is the present value of a dollar?
4. Does aqu always mean water in a prescription?

The author proceeded in effect to take these questions as the starting-point for a modified system of pharmaceutical examination, recommending that the present "First" examination should stand as it is, with the addition of elementary mathematics; and that two years later another preliminary examination should be passed, the subjects of which should be Latin, translation from some work bearing on drugs; etymology, a knowledge of the meaning and derivation of some of the principal names and terms used in pharmacy; history, an outline of the history of medicine and pharmacy; elementary pharmacy. Following this would come the Minor examination (three years after second examination); the subjects to be as at present, but the examination to be divided into two parts, an interval of at least six months to elapse between the two portions. A high percentage (say 95 per cent.) having been obtained in any single subject, the candidate would be held to have passed in that subject. Were this the rule the standard might be raised with advantage all round. The Major examination must remain; the goal for the would-be pharmaceutical chemist.

The author proceeded to give young men who have not passed the Minor examination some advice as to the manner and spirit in which they should prepare for it, incidentally bringing in such subjects as the Pharmaceutical Society's Museum report, and an imperial pharmacopœia, and concluded by maintaining:—Firstly, that the minimum of education allowable must be sufficient to meet the business of our daily life, and not merely what may prove sufficient to pass the Minor examination as at present constituted; secondly, that the Major examination in most respects more nearly approximates to the actual requirements; thirdly, that additional knowledge to that scheduled is required, and may possibly be best introduced by rearrangement of the present examinations if the Minor is to remain as the qualifying standard; fourthly, that there are many things which it is to one's interest to know which do not come strictly within an examination schedule, and not the least of these are accurate thinking and reasoning.

A discussion followed, and on the motion of the Chairman it was unanimously agreed to send a letter to Mr. Sutherland at Burras Firth, Unst, Shetland, thanking him for his interesting paper, and expressing a hope that he would soon be restored to his usual health.

GLASGOW AND WEST OF SCOTLAND PHARMACEUTICAL ASSOCIATION.

THE usual fortnightly meeting of this Association was held on the evening of January 23, Mr. W. L. Currie, President, in the chair.

UNQUALIFIED ASSISTANTS IN BRANCH SHOPS.

MR. CURRIE read a paper on the above subject. To fully appreciate his remarks it has to be explained that Mr. Currie is Local Secretary in Glasgow to the Pharmaceutical Society. He said the immediate reason which had impelled him to bring this subject more directly before the notice of the Association was the remarks made by the President of the Pharmaceutical Society at the Council meeting held on January 8. No one who had carefully read and studied that deliverance of Mr. Carteighe's could have two opinions as to the meaning and value attached to the statement. The man who had the courage to utter those words had a full sense of his convictions, and was prepared to take any responsibility which might result. He (Mr. Currie) had no doubt whatever that the President of the Society felt called upon to make some official statement after recent prosecutions, and the remarks which they called forth in the public Press, and no better method could he have adopted. If they were to raise themselves above suspicion in this matter of unqualified assistants in branch shops they must holdly face the question, and give their dignified, but united,

support to the Pharmaceutical Council. Mr. Currie was not so sure of the method to be adopted in persuading any erring brother-in-trade to fulfil the legal and common sense requirement, because the matter was a difficult one, and the interference in the conducting of another man's business might be wrongly construed. It might be the duty of the Local Secretary, if such breaches of the law were within his actual knowledge, to communicate with an offender, pointing out the fault, and suggesting that it be remedied so as to prevent publicity. If one could set aside the friendly capacity, and for the time being assume the official, with the assurance that no ill-feeling would be engendered as an after-consequence, good and well; but when a strained feeling was likely to result, then some other means would require to be adopted. He did not mean by this that the Local Secretary should shirk his duty, but he would require to be careful not to give offence. What he thought should be done was that the Pharmaceutical Society, through its officials, should send to every drug-shop in the country a printed copy of the President's remarks on this important subject [as suggested by the *C & D.*] and if after such plain speaking there should still be those who ignored the demand to comply with the law, then there need be no hesitation, either by neighbour or Local Secretary, in reporting the offender to the proper quarter. This question of the management of branch shops was one of wide importance in view of present day requirements. Even yet there were those who went the length of saying that the qualified chemist was entitled to have as many branch-shops as he liked provided he put a competent man in charge. But he would like to point out that there was a vast difference between competency and qualification, and while the private individual might think he was the best judge as to the capacity of the manager of a branch, the law did not recognise anything but qualification. A widow carrying on a business had to engage a qualified man, and in the eye of the law there was no difference between the branch-shop and the widow's shop. The widows' clause had been the greatest hindrance possible to progressive legislation, and at the earliest opportunity its operation should be cancelled. It had been a powerful argument against the chemists during recent years. They in Glasgow had a very great evil to contend with in the case of drug-shops owned by doctors and by unqualified owners, covered in some way by doctors. In those places business in most cases was carried on without regard to Pharmacy or any other Acts, and recent prosecutions, which showed a deplorable state of affairs, instead of stopping the growth of such premises, seemed to have served the opposite purpose, for they were on the increase. Pharmacists should take a strong stand in this matter. They should make it their duty to conduct their own businesses on strictly legal, as well as moral, lines, and also see that others did so. If doctors' premises were to be kept open for the purpose of retailing drugs of all kinds to the public, then they should come under the category of branch-shops and be in charge of qualified men, instead of, as at present, in charge of boys, girls, or youths. The doctor could not attend to two businesses at one time, and if he was exercising his profession outside, he could not be supervising inside. Pharmacists must never forget that the public safety had strong claims upon them, and they should see that every possible means were used to preserve and protect their prerogative. No more powerful evidence could be produced of the desire of the Pharmaceutical Council to improve the position of pharmacy than the recent declaration of the President on this question of the management of branch-shops, and the best reward the Society could have was to receive the support of every qualified man throughout the country.

In the course of a discussion on the paper,

MR. LAING said he had no confidence whatever in leaving anything to moral suasion. Those who conducted their business on principles of morality were at the mercy of those who had no morality, because the man who had not got any in a business had far more chances of succeeding than the one who had. He thoroughly approved of Mr. Carteighe's remarks.

MR. ROBERTSON said that it was but fair when the Society were prosecuting doctors that unqualified managers of chemists' shops should also be prosecuted. He thought the plan proposed by Mr. Currie was the proper one to adopt.

Mr. DUNLOP thought the Council of the Society were asking too much of the Local Secretaries in acting in this matter in the way suggested. It put them in a very delicate position.

Mr. WATSON thought the onus ought not to rest on the Local Secretaries. No better plan, he believed, for raising the status of pharmacy could be adopted than the prosecution of unqualified managers of branch shops.

Mr. GATES suggested that the proper course would be to appoint travelling inspectors to find out the conditions of all shops throughout the country.

Mr. TAYLOR remarked that the Pharmaceutical Society had not carried out the provisions of the Act as the trade generally had been led to expect, they had not been sufficiently grasping. The mistake in the framing of the Act of 1857 was that instead of only scheduling poisons the whole lot of drugs were not included.

Mr. MACKENZIE suggested the passing of a Bill providing for all the B.P. drugs, either alone or in preparations, being dispensed only by qualified men. This would do away with patent medicines, or at least it would put patent medicines into the hands of the chemist.

Mr. ANDERSON RUSSELL said there had been a great mistake made in singling out for prosecution doctors' shops specifically, and not proceeding as well against drug-shops with unqualified managers. The way in which the Act was administered at present, singling out one here and another there, gave room for what really amounted to persecution. Mr. Russell did not think the country was prepared to assent to the scheduling of all drugs in the Pharmacy Act, but he said it should be done, and in any future Bill they should press hard to get a schedule of at least all the more potent drugs.

After some further discussion Mr. LAING formally moved that they "thoroughly approve of the views of the President of the Pharmaceutical Society in regard to unqualified managers in branch-shops, and concur in his remarks, and think that a reprint thereof should be sent from the Registrar of the Society to all druggists and drug-shops throughout the country."

Mr. RUSSELL moved as an amendment that the matter be remitted to the Standing Committee with powers, his object being to have his suggestion as to a census of drug-shops being included in the motion to be forwarded to the Council of the Society.

On a division 9 voted for the motion, and 7 for the amendment, several declining to vote.

PROPRIETARY MEDICINES IN THE MEDICAL SERVICE

was the subject of a paper read by the SECRETARY, Mr. J. Anderson Russell, who said that consideration of the prescribing of medical men was quite within the sphere of chemists. Unfortunately on this borderland many jealousies had developed, and much acrimony existed between the rank and file of the two bodies. Those conditions had attracted his attention with special force in connection with parish work. In the Glasgow City Parish (of the Council of which Mr. Russell is a member), the question applied to medicine dispensed in five chemists' establishments, and supplied to a population of between 5,000 and 6,000 poor persons, 40 per cent. of whom were on the sick list, and it applied to services rendered by twelve medical men. It was found that proprietaries, including an emulsion of cod-liver oil, a combination of chloral and potassium bromide, one of santal oil and cubebs, a petroleum emulsion, and a wine of cod-liver and peptonate of iron, were being prescribed. The absurdity of such a procedure was apparent when they knew that in none of those instances was the prescriber cognisant of all the ingredients in the preparation which he prescribed, though probably those specified as contained in them, and on the action of which he no doubt relied for results, were the important ones. Still he was working in the dark, and for all he knew he might be administering something having an action differing very materially from that which he believed himself to be prescribing. In contradistinction to this was the circumstance that qualified chemists were at his service who were quite capable and prepared to compound the drugs prescribed in the form desired, with this advantage, that he would know exactly all he was giving to patients, both active drugs and combining adjuncts. In addition to this the important question of economy came

in. In regard to the emulsion of cod-liver oil it was shown the compound desired could be furnished by the dispensing chemist at about one-fourth the cost of the proprietary. It was put forward as a justification and reason for the use of the proprietary medicines that they were prescribed in other parishes without objection, in the public hospitals, and by men undeniably eminent in their profession. In connection with public hospitals the author stated that they are schools for medical teaching, and their physicians occupy the van of medical progress. If through thoughtlessness they fell into bad habits, it was to be expected those bad habits would be propagated and spread throughout the country by their pupils. He had, however, learned on good authority that, in some hospitals at least, teachers very frequently were requested and did alter prescriptions for proprietaries to their equivalents compounded by the hospital dispensers. Another example of thoughtlessness was that physicians spoke of preparations by proprietary titles instead of by the drugs of which they were composed, so that proprietaries got the credit of therapeutic qualities which should be attributed to the drugs composing them. It was much to be feared that physicians were permitting themselves to be led a little blindly by enterprising individuals into experimenting with novelties without having mastered what had been made known regarding substances no longer novelties. There remained an important phase of the question for the consideration of pharmacists. In the discussion at the Parish Council it was said, somewhat rudely, by a medical man—"But chemists cannot make these preparations properly." That contention was at once completely rebutted by the chemists present volunteering personally to give satisfaction in the matter. There was this difficulty to be met. Medical men were not prepared to work out for themselves formulae to take the place of proprietaries; if the combination be left to chemists they had no standard to go by. The consequence was, good results might be obtained here, bad results there, and with the competition that existed and efforts made to undersell each other, that was less surprising. Pharmacists would not desire that medical men should be confined to the B.P. in their prescribing, but he would suggest that official formulae for popular preparations be compiled and published. The General Medical Council was the authority for the Pharmacopœia; let the Pharmaceutical Council, through the facilities within its power, attend to the other. This would be a standing work for it to accomplish, and the fruits of this work would render future compilations of the Pharmacopœia much more easy.

It was agreed to adjourn the discussion on Mr. Russell's paper till a future meeting.

SHEFFIELD PHARMACEUTICAL AND CHEMICAL SOCIETY.

ON Wednesday evening Mr. W. L. HOWIE, F.R.S., of London, delivered a lecture on his experiences in a tour "From Mont Blanc to the Matterhorn" to the members of the Sheffield Pharmaceutical and Chemical Society. The lecture was in aid of the funds of the Sheffield School of Pharmacy. Sir Hy. Stephenson presided over a large attendance. The lecturer at the outset remarked that a more well-worn theme or a district more thoroughly exploited than that from Mont Blanc to the Matterhorn could scarcely have been selected for a lecture. The earliest as well as the greatest climbers had said that no matter how often they were visited, or however long the traveller might remain, the overpowering grandeur of these wonderful mountains must continue to fascinate. An example of the "Scottish Alps" was first shown, and then followed, by way of contrast, a series of magnificent views of the peaks and tributary glaciers of the Mer de Glace near Chamounix, obtained on a visit to the "Jardin," a grassy oasis under the peak of the Aiguille Verte, surrounded on all sides by the weird desolation of limitless rock and glacier. There came several views of Chamounix leading up to the Brevin, which commands Mont Blanc, much like looking across a street from an upper window, only the street is more than three miles wide, and the pavement about 5,000 feet below. The monarch of mountains in sunshine and storm was illustrated by many impressive photographs and graphic

descriptions; and then came a series of interesting glacier-views depicting faithfully the various aspects of one of these great ice rivers, from the collecting-fields of everlasting snow to the extremity where the ice, frozen some half-century before on the mountain top, is finally melted in the hot sun. The views of the crevasses and transparent icy walls of the glacier grottos were most realistic. The three days' journey round Mont Blanc to Courmayeur was very charmingly described, the lecturer having secured views of the best points and of cloud scenery. The antiquities of Aosta were next dealt with, dating from the time of Augustus Cæsar, and from this old pagan world a rapid journey was made to Milan and the snail marbles of the famous cathedral, shown in a series of slides of marvellous fidelity and beauty, which repeatedly evoked warm marks of appreciation. Views of places of special interest on the way to the foot of the Matterhorn were given as well as of the Matterhorn itself. To this part of the lecture piquancy was given by climbing incidents, and examples of the honours of Alpine guides and artists. The last slides represented the great peak in several striking aspects, and in conclusion the lecturer remarked that, sleeping or waking, the Matterhorn remained to all who had felt the influence of its matchless yet fearful beauty, a never-fading and glorious memory. The slides used to illustrate the lecture were by Mr. Howie. At the close a hearty vote of thanks was accorded to the lecturer and Chairman.

LIVERPOOL CHEMISTS' ASSOCIATION.

THE annual meeting was held on January 23, the new President, Mr. M. Conroy, in the chair. The annual report, read by Mr. A. S. BUCK, showed that the membership is now 127, being a gain of seven on the year. The Treasurer's statement showed a balance in hand of 16*l.* 9*s.* 3*d.* The meeting confirmed the recommendation of the Council to admit associate members on election and the payment of a nominal fee, so that students and apprentices might have the full advantage of the museum and library. The following gentlemen were re-elected as members of the Council:—Dr. Symes, Messrs T. F. Abraham, Hocken, A. H. Samuel, and Wellings, and Messrs. Harold Wyatt, jun., and C. J. S. Thompson were elected for the first time.

Votes of thanks were passed to the donors of books and journals to the library of the Association during the past year, and the officers and Council were thanked for their services.

Mr. Wardleworth exhibited a specimen of *Coca Erythrozylin* grown in Ceylon.

Mr. ED DAVIES, F.C.S., F.I.C., then read a paper on the "Illuminating Power of Hydrocarbons," in which he laid great stress on the recent developments in connection with acetylene. He outlined the history of the hydrocarbons and alluded to their mysterious origin in nature. By a series of successful and interesting experiments he showed the value of acetylene-gas as an illuminant, either alone or in combination with coal-gas, the latter being 1 of acetylene to 9 of coal-gas. When this combination was burnt in an ordinary burner the non-luminous gap which appears in the ordinary gas-flame was completely lost, and a very much smaller supply of gas was necessary for the same amount of light than would be produced by ordinary gas alone. He mentioned that bronze or brass fittings should not be used with acetylene gas, as copper forms explosive compounds with those metals. Mr. Davies dealt with the various theories regarding the luminosity of flame, and showed that the old idea of the incandescence of the carbon was in the main correct, although recent researches had thrown considerable light on the subject.

LIVERPOOL PHARMACEUTICAL STUDENTS' SOCIETY.

THIS Society met on January 23, the President, Mr. T. S. Wokes, in the chair.

MEMBERS' NOTES.

Mr. R. H. MITCHELL exhibited a specimen of the eucalyptus ointment made by a Tasmanian company. It is made by digesting the fresh leaves of *Eucalyptus Globulus* in melted lard. It was much admired for its appearance and fragrance.

Mr. PROSPER H. MARSDEN exhibited some eucalyptus-flowers from Nice, also some acorns of a special variety which are roasted and used as coffee in the South of France; some *Xylopiæ æthiopica* (Egyptian pepper), which is used as a remedy for gonorrhœa; some *Mucuna urens*, sometimes found among Calabar beans; also some genuine "crabs' eyes," a calculus consisting of carbonate of calcium found in the *Astacus fluviatilis*, or river crayfish, which were formerly used as an antacid, and *Oniscus asellus*, a species of woodlouse used in France under the name of "Cloportes," said to have refrigerant properties, due to the presence in them of nitrate of potassium.

Mr. J. R. LOGAN, M.B., then delivered a lecture on

ALBUMEN AND ITS ALLIES.

Albumen, he said, held the same place in the animal world as cellulose in the vegetable world. In all protoplasm we find albumen or bodies yielding albumen. In all albumens sulphur is present, and in hæmoglobin a little iron is also present, while the higher albumens contain phosphorus. Gelatin contains no sulphur. For experimental purposes the white of an egg and serum are commonly used. Serum does not exist as such in the living blood, but fibrin is formed in the clotting of blood, and consists of fibrinogen, fibrinoplastin, and fibrin ferment. The ferment brings the other two together to form a clot. Some fibrinoplastin remains in the serum.

The tests for albumen were then described. (1) Xanthoproteic reaction: Take fairly dry albumen and nitric acid, when a yellow colour is formed intensified by heating. (2) Coagulation by heat either alone or with an acid. (3) Mercuric chloride gives a white precipitate. (4) Picric acid gives a copious precipitate. This test is very quick, and as it precipitates almost every form of albumen it is, perhaps, the best of all tests. The nitric-acid precipitate is insoluble on dilution, the picric-acid precipitate is soluble.

The separation of serum albumen and serum globulin was effected by a saturated solution of magnesium sulphate, the globulin being precipitated while the albumen remains in solution. While other salts, such as sodium chloride 2 per cent. or 3 per cent., are required to dissolve the globulin, only the saturated solution of magnesium sulphate will precipitate it. In the stomach albumen is digested by pepsin and hydrochloric acid; in the intestines the same is done by alkali and trypsin. The final product is peptone, and it is a singular thing that the presence of more than a certain quantity of peptone interferes with digestion, the peptone exhibiting an inhibitory action over the power of the peptonic ferment. This is analogous to the arrest of alcoholic fermentation when the proportion of alcohol formed in the liquid reaches 20 per cent. The biurate reaction for peptone was shown and described. It is: To a solution of peptone add a minute quantity of solution of sulphate of copper and excess of liquor potassæ, when a characteristic pink colour is produced.

Between the formation of peptone and albumen are a large number of intermediate bodies known as albumoses, our knowledge of which is yet in an unsettled condition. Casein, or albumen of milk, when received into the stomach becomes coagulated by the rennet ferment, aided by the natural acidity of the gastric juice, and separates from the liquid portion, or whey, which, contrary to the general view, the lecturer held to contain some of the milk-albumen as peptone. Casein is an alkaline albumen, and it is remarkable that it is not coagulated by boiling. The effect of cooking on the various foods was reviewed generally, the lecturer remarking that, with the exception of vegetable foods, in which the heating burst the starch granules and partly converted the starch into dextrin, cooking rather hindered easy digestion. The reason is probably that man from the earliest times has cooked his food, finding that it was more easily kept when cooked, the germs it contained being thereby destroyed. This was especially the case with milk, whose digestibility was decidedly decreased by cooking; but, on the other hand, the germs and microbes in it were rendered inert, and it was consequently sterilised. A diet of raw meat was very easily disposed of by the stomach; but as such parasites as tapeworms, and microbes like that of tuberculosis, were transmitted readily to the human body from raw flesh meat, the practice of cooking was to be encouraged, though the easy assimilation of the food was

thereby impaired. Whilst on the subject of digestion he drew attention to the property possessed by many microbes of partial peptonisation or formation of albumoses—Koch's bacillus, for example, forms an albumose contained in the well-known tuberculin, as also do the diphtheria, tetanus, and anthrax bacilli. The peptones formed in the digestion of cartilaginous portions of meat or the gelatin do not go towards the building-up of animal tissues, whilst albumen peptone does. Albumen is a colloid, peptone a crystalloid. The latter is, therefore, capable of osmotic transmission through the walls of the cells of the stomach. These cells have the remarkable power of reconvertng the peptones into, after passing into their interior, albumen again.

MIDLAND PHARMACEUTICAL ASSOCIATION.

AT last week's meeting Mr. F. SMITH read a paper on "The Sun and His Attendant Family," in the course of which he gave a brief review of the Ptolemaic system, and an epitome of the Copernician system, upon which all modern systems are founded. The laws of the solar system and source of heat and light were touched upon, also the theory of solar contraction, physical constitution of the sun, photospheres, chromospheres, prominences, corona, and sun-spots; the size and distance of the moon, influence of the moon upon the tides, and eclipses of the moon; the planets and their satellites, possibilities of Mars being inhabited, asteroids, comets, were also described, as also was the description of the motion of the solar system in space. The lecture was illustrated by lime-light views, and proved of much interest to those present.

MIDLAND CHEMISTS' ASSISTANTS' ASSOCIATION.

ON Wednesday, January 22, at Exchange Rooms Birmingham, Mr. T. C. CLARKE gave a description of his "Personal Experiences of the Minor." In the course of his paper he detailed his difficulties in preparing for and undergoing his examination.

This week's meeting was held on Wednesday evening at the Exchange Rooms, Birmingham. Mr. T. C. CLARKE (President), who occupied the chair, said that at their last meeting it was suggested that some suitable method should be adopted by which the members could be brought together during the summer months, and thus keep the interest in the Association sustained. (Hear, hear.) In the course of a discussion on the subject, some of the members expressed the view that they should form themselves into a photographic club for the summer, and it was pointed out that they might avail themselves of the opportunity of photographing various kinds of vegetable growths and flowers that could only be seen in certain months. The result of their work in the summer might serve as items for discussion in the winter. It was ultimately decided to appoint a committee to consider the matter.

Mr. A. L. TAYLOR read a paper on "Chemistry Past and Present." He said he thought the science of chemistry stood at the head of all the sciences in its universal importance and application. Manufactures, arts, and last, but by no means least, medicine were indebted in a greater or lesser degree to chemistry. He took it that the first chapter of the history of chemistry extended from the fourth to the seventeenth century, ending in 1627 with their illustrious fellow-countryman, Robert Boyle. The chemistry of those years was really based on the teaching of Aristotle, which supposed all matter to be of one kind under four different and distinct conditions—viz., dryness and wetness (earth), wetness and coldness (water), wetness and heat (air or steam), and dryness and heat (fire). They might, he considered, pride themselves on the fact that Boyle completely overthrew the doctrines of Aristotle and of Geber, and inaugurated a new era of chemistry. Boyle was amongst the first of chemists to advocate the study of chemistry for its own sake. The lecturer then dealt briefly with the work of the more recent discoverers of chemical properties.

EDINBURGH DISTRICT CHEMISTS' TRADE ASSOCIATION.

AT the meeting held in Edinburgh on Tuesday evening, Mr. Peter Boa in the chair, there was a small attendance. Mr.

John T. Coats, 91 Broughton Street, was elected a member of the Association. Mr. C. F. HENRY, the Secretary, stated that he had received from Mr. McLaren, the convener of the Fall Committee, a cheque for 277. in connection with the transfer of the Chemists' Ball to the Association. The adjourned discussion on

SOME RELATIONS BETWEEN PRESCRIBER AND DISPENSER

was resumed by Mr. GEORGE LUNAN, who, in a lengthy speech, traversed the ground opened up by the Chairman at the previous meeting, giving instances from personal experience of the dispensing done by doctors, and maintaining in regard to this matter that the customs obtaining in different districts could not soon be reduced to a uniform and ideal level of doctors prescribing and chemists dispensing. As to prescribing by the latter, he was of opinion that the educational policy of the Pharmaceutical Society would in course of time remove it, and would do far more towards that end than fresh legislation. Mr. Lunan then spoke on the ownership of the prescription; and expressed the opinion that it belonged to the patient, but not to do with it what he liked.

Mr. LYON DEWAR said the chemist had no right of ownership in the prescription. He invariably refused to give a copy of a prescription, because his experience was that when he did so he never was asked to dispense the medicine again. He did not think much could be said about proprietary medicines, because there was not a chemist in the room who would not like his own speciality introduced all over the trade.

Mr. C. A. MACPHERSON, after speaking about dispensing and prescribing and prescription-ownership, expressed his views in regard to proprietary medicines, of which he said there are different kinds. Antipylin is a proprietary medicine, and so is Thomson's or Jones's mixture, which had nothing in it but what anybody could make up. When a preparation was prescribed by a doctor, he did not think it was justifiable to substitute another for it. If it could be got at all he got it, and if not, he sent to the doctor, asking him to substitute something else for it.

Mr. JOHN BOWMAN said he thought that in the case of proprietary medicines being prescribed they should be a little more independent, and tell the medical man that it was not easily procured. He had done that, and he always found the medical man ready to prescribe something like it. In the case of a medical man coming into his shop and writing a prescription, he invariably asked him if he wished the patient to get it. It was sometimes the case that two doctors might be attending members of the same family where club doctors were employed, and one doctor might not wish another to see his prescription. In regard to chemists prescribing, he said there was a great change in Leith during his twenty-five years' experience there; but he sometimes found that the doctors did not thank them for sending a poor patient to them.

Mr. J. R. HILL also spoke about ownership of the prescription, and quoted a decision given in a Cincinnati court in 1872 in a case where a patient sued a chemist for possession of a prescription which the pharmacist refused to deliver up. The judgment of the Court was that a chemist was under no obligation to furnish a copy or permit anyone to make a copy of a prescription, and that when the chemist had compounded the drug the paper on which the prescription was written was his. The chemist could keep a copy of the prescription for his own protection, and, even if he had promised to give a copy of it, that was a gratuitous promise and was void. A discussion in a medical paper followed, and the outcome of that was agreement with the Court's decision. Mr. Hill had spoken about the matter to a member of the Faculty of Advocates, and he ridiculed the idea of anybody having a right to the prescription. He put it this way—a man went to a doctor and paid him a fee for his advice and everything he got from him; for the prescription as well as the advice. He used the prescription as part of the advice for which he paid the fee, and on that ground no law-court in this country would for a moment entertain any proposal that either the chemist or the prescriber was the owner. The question had never been tried in the law-courts of this country. As to dispensing proprietary medicines, he thought that was one of the most serious evils in the present position of medicine. It seemed to be pretty general throughout the whole world that

medical men were now accepting prescriptions ready made from people who might or might not be in possession of the necessary skill for prescribing medicine for particular diseases. He feared from what he had seen that the prescribers accepted the manufacturers' statements as if they were well founded, and that they gathered their knowledge of the medicine and its proper use from the advertising in medical journals or from the finely-put phrases of certain very accomplished travellers, who made it their business to call on them and introduce their various remedies. Mr. Hill then spoke of prescribing by chemists, which, he said, had been largely reduced owing to the policy of the Pharmaceutical Society; and concluded by referring to the work which chemists could do to assist doctors.

The CHAIRMAN, in closing the discussion, said, in regard to Mr. Hill's remarks on the ownership of prescriptions, he pointed out that the American procedure was somewhat different from theirs. They almost invariably kept the original prescription, and the patient did not get it back. In relation to that procedure he thought their own was a very reasonable one. They took a copy for their own protection and returned the prescription to the patient. He thought there was a greater amount of *bona fides* in that transaction than in the other, and it was the fairest way of doing.

EDINBURGH DECIMAL ASSOCIATION.

The SECRETARY read a letter from Mr. R. C. Millar, C.A., Secretary of the Edinburgh Decimal Association, calling attention to the annual report, and asking them to pass a resolution in favour of the recommendation contained in the report. Mr. MCGLASHAN proposed that they adopt a resolution embodying the recommendations in the report. Mr. LUNAN thought the meeting was too small for them to discuss such an important question, and he moved that the letter be allowed to lie over till next meeting. Mr. WYLIE seconded, and this was agreed to.

Trade Notes.

THREE gold medals have been awarded to Messrs. Burroughs, Wellcome & Co., of London, at the Atlanta Exposition, for a varied exhibit of their preparations.

MESSRS. BERGER, KAHLER & Co., of 7 Mark Lane, have been appointed agents for the Anhaltische Blei- und Silberwerke, at Silberhütte, Anhalt, Germany, manufacturers of lead of silver salts.

COCOAGENE.—Messrs. C. Barry & Co., 29 Ropemaker Street, Finsbury, E.C., inform us that they are specially anxious to remind buyers that the retail price for Boisselier's Cocoagene is 6d. for 18 cups—i.e., three cups for 1d. We said last week that there are 12 tablets in a box, there are really 18.

MESSRS. PARKE, DAVIS & Co's price-list for 1896 is an octavo volume of 228 pages. In it the whole of the firm's manufactures are specified and, where possible, illustrated, and besides there are numerous pages of useful information. We note with curiosity that the artist who designed the cover has made Hippocrates exceedingly like the Marquis of Salisbury. Chemists who wish a copy of the price-list should write to 21 North Andley Street, London, but those who are nearer headquarters, Detroit, Mich., U.S.A., may write to that address.

In sending us a copy of their new catalogue of photographic specialties (which contains some remarkable pictures), the Thornton Pickard Manufacturing Company, Altrincham, near Manchester, enclose an album of photographs of their works, which are not only excellent pictures but show how the company have built up out of two specialties a large and flourishing industry. These specialties are the ruby camera and the famous shutter. We observe from the catalogue that the camera has been so improved that it can be used as a hand-camera, and the first picture in the catalogue is one of a little maid of about three holding the camera as if she loved it.

* It is also the custom to supply physicians with prescription-blanks having the chemist's name upon them, and which are frequently addressed to the chemist. This circumstance points to a distinction between the American and English customs.—ED. C. & D.

CONSEQUENT on the much-regretted death of Mr. John Banks, the management of the surgeons' instrument department in the business of Messrs. S. Maw, Son & Thompson will be taken over by Mr. Henry Trentham Maw, second son of Mr. Charles Maw, senior partner in the firm, assisted by the present staff, most of whom have been for many years employed in the department. Mr. Henry Trentham Maw was educated at Cambridge and St. Bartholomew's Hospital, he took his degrees of M.A. and M.B. at Cambridge University, he is member of the Royal College of Surgeons, and has had considerable experience in London and other hospitals.

A 50*l.* PRIZE FOR A FRUIT DRYER.—Through the Bath and West of England Agricultural Society, which will hold its annual show at St. Albans from May 27 to June 1 next, the proprietors of *The Ironmonger* newspaper, London, offer a prize of 50*l.* for the best machine for fruit and vegetable drying. It is hoped that this offer may have the effect of bringing forward a machine which will enable our fruit and vegetable growers to dry their products, and so realise a much higher price for them than they commonly do now that the universal practice is to glut the markets with all kinds of fruit directly it is ripe. Full particulars of the competition will be supplied by the secretary of the Bath and West of England Society, Mr. T. F. Plowman, 4 Terrace Walk, Bath, and the machines will be tried and judged at the St. Albans Show.

Personalities.

MR. M. WOLVERSON, chemist, Hednesford, has been appointed a justice of the peace for his district.

MR. DAVID REES, of the Medical Hall, Llandiloes, has been appointed Registrar of Marriages for the district.

MR. HORACE DAVENPORT asks us to state that applications for membership of the Chemists' Club should not be made to him, but to the Secretaries of "Camwal" and Messrs. Barclay & Son (Limited).

IN connection with the article on the Thomsons in our last issue we learn that Dr. Dundas Thomson became lecturer in chemistry at St. Thomas's in May, 1853, and held the chair until February, 1860, when he was succeeded by the late Dr. Bernays, on whose death Professor Dunstan was appointed. It is a curious coincidence that of the present Secretaries of the Chemical Society one is a relative of Thomson, and the other his successor at St. Thomas's and the University of London.

IN publishing the portraits of wholesale druggists last week, we were not able in all cases to give those of the whole of the partners in the firms represented. Mr. Layman, sen. (Wright, Layman & Umney), Mr. Treacher and Mr. Clarke (Hodgkinsons, Treacher & Clarke), Mr. Sidney Baiss (Baiss Brothers), Mr. Wilson Stacey (Corbyn, Stacey & Co.), Mr. E. H. Grimwade (Grimwade, Ridley & Co.), and Mr. J. Munison (Lorimer & Co.) were among those whose portraits were not available in time.

* SIR JAMES HORNOR HASLETT, who was on January 22 last elected M.P. for North Belfast, in succession to the late Sir Edward Harland, is a son of the Rev. Henry Haslett, Presbyterian minister at Castlereagh, was born at Knock, co. Down, in 1833, and is a chemist and druggist at Belfast, where he began business in partnership with his brothers in 1854. Sir James Haslett, who is a Magistrate and Alderman of Belfast, and was Mayor in 1887 and 1888, was created a Knight Bachelor in 1887. He married, in 1877, Annie, daughter of the late Mr. Thomas Rea, of Islandreagh, co. Antrim, and Hazelville Road, Hornsey Lane, N., being left a widower in 1894. He is not new to Parliamentary life, having been returned as the first member for West Belfast in 1885, when he defeated Mr. Thomas Sexton by 35 votes. At the General Election of 1886, however, he was defeated by Mr. Sexton by a majority of 103 votes, and since that date he has been out of Parliament. Sir James Haslett has taken a prominent part in the pharmaceutical politics of Ireland, and proved an able champion of the druggist party in the Parliamentary contest which ended with the Pharmacy Act (Ireland) Amendment Act of 1890. He is the only chemist and druggist in Parliament.

Legal Reports.

APPEAL UNDER THE IRISH PHARMACY ACT.

At the Newry Quarter Sessions on January 24, Mr. David Wilson, Rathfriland, appealed against a decision of the Lower Court convicting him of a breach of the Poisons Act—viz., the retailing and dispensing of cantharides contained in a bottle of Leeming's essence, the particulars of which have already appeared. The defendant, who admitted the offences, pleaded ignorance of the law, and said he got the article from one of the most respectable firms in Dublin. He asked that the two convictions—for keeping open shop and for selling the essence—be counted as one case, or that one of the two convictions be quashed.

Mr. R. S. Millen appeared for the Pharmaceutical Society, and Mr. McClelland, solicitor, represented the defendant and appellant.

Mr. McClelland said that on behalf of the defendant he admitted the offences, but desired to offer an explanation. His client was a respectable merchant in Rathfriland. He got notice some time ago to the effect that it would be well for him to get rid of anything the contents of which were of a poisonous nature. He complied with that notice so far as he could, but unfortunately it turned out that this Leeming's essence contained cantharides, a scheduled poison. He was instructed that in the Court below it was stated that the reason cantharides was scheduled was because it had formerly been used for immoral purposes. But Mr. Wilson knew nothing about that. He got the article from one of the most respectable firms in Dublin. He (Mr. McClelland) suggested that the ends of justice would be met if one of the convictions were confirmed and the other reversed.

His Honour: Mr. Millen, don't you think the exigencies of this transaction would be met by the conviction in the one offence?

Mr. Millen said that acting on his instructions he must press the case.

His Honour said if the law empowered him to reverse one of the decisions he would do so.

Mr. Millen said that undoubtedly two offences were set out in the Act of Parliament—one for actually selling, and the other for keeping open shop for sale. Of course, if it were left to himself he would know how to act.

His Honour said he would reserve his decision, and Mr. Millen said he would write to the Pharmaceutical Society in the meantime.

SALE OF FOOD AND DRUGS ACT.

SEIDLITZ-POWDERS.

THE questions raised in defence to the prosecution of Mr. E. F. Strickland, chemist and druggist, of Ealing, for having sold seidlitz powders not in accordance with the formula in the British Pharmacopœia, reported last week, are to be carried to appeal. On Saturday last Mr. F. Walker, solicitor, applied to the Brentford Justices to state a case for the consideration of the High Court upon the points following:—(1) Whether the summons issued against the said E. F. Strickland disclosed any legal offence; (2) whether the public analyst duly complied with section 15 of the Sale of Food and Drugs Act; (3) whether the person requiring the article to be analysed duly complied with sections 13 and 16 of the said Act; (4) whether the evidence adduced at the trial of the said case proved any offence under the said Act; and (5) whether there was any sufficient legal evidence to show that the article purchased by the complainant was delivered to the public analyst. Mr. Walker pointed out the great importance to chemists which a settlement of the points involved.

Mr. Sharpe (on the Bench) said there was little in the points. The main one was totally ignored. It was whether chemists should be confined within the British Pharmacopœia, and never be allowed to sell compounds outside its formulae. There was nothing in the application on the points raised.

Mr. Walker submitted his first point embraced the one mentioned. The grave question was whether a man in selling, as Mr. Strickland did, a thing similar to one pre-

scribed in the British Pharmacopœia, but in larger proportions, committed an offence.

The Chairman said the Justices had considered the points raised, and were of opinion they were frivolous.

Mr. Walker said that if that were the opinion he must abide by it, and take such other courses as were open to him. He submitted still that his form was correct.

The Chairman said that No. 1 could not be made the issue by any twisting. The Bench were willing to aid if the proper form were put before them.

Subsequently Mr. Walker renewed his application on the following grounds:—"I ask the Bench to grant my application on the ground that a chemist does not commit any offence under the Sale of Food and Drugs Act if, on being asked for a box of seidlitz powders, he supplies powders of the same ingredients and similar proportions to the *pulvis sodæ tartarata effervescentis*—effervescent tartarated-soda powder—mentioned in page 26 of the British Pharmacopœia, 1885, containing a larger quantity of such powder than the quantity there specified."

The Chairman said the Bench would grant a case on that point.

Mr. Walker: May I include in the case the grave point whether section 16 was complied with?

The Chairman: We have decided that on the question of fact.

Mr. Walker: I am sorry for that; it will drive me to apply for a mandamus.

BEESWAX.

At Tunbridge Wells, on Friday, Mr. Albert Chapman, grocer, Pembury, was summoned for selling beeswax not of the nature, quality, and substance demanded. Mr. Adams, of Maidstone, the Kent public analyst, certified that the sample purchased contained 50 per cent. of paraffin wax. Defendant stated that he was ignorant of the presence of paraffin in the beeswax. The Bench said no disgrace rested on the character of the defendant, who did not know the nature of the article sold. A fine of 1s and 13s costs was imposed.

THE ANALYST'S CERTIFICATE.

In the Queen's Bench Division on January 27, an appeal from the Clerkenwell stipendiary magistrate was heard by Mr. Justice Hawkins and Mr. Justice Kennedy in the case of *Fortune v. Hanson*. Hanson had sold a churn of milk which the public analyst certified to be adulterated with added water. The words of the certificate on which the appeal turned were as follows:—"I am of opinion that the said sample contained percentages of foreign ingredients as under:—5 per cent. of added water to the prejudice of the purchaser." The magistrate dismissed the summons on the ground that the certificate was not in order, and the prosecutor appealed. The Court now supported the magistrate's decision. After hearing arguments from Mr. Macmorran for the appellant, and from Mr. Morton Smith for the respondent, Mr. Justice Hawkins said the certificate did not conform to the requirements of the Act. It was admitted that milk naturally had water in it, and therefore it was necessary, in his opinion, that the magistrate should know what standard the analyst took. Standards differed greatly; the magistrate might take one, and the analyst another. To say there was 5 per cent. of "added water" was merely an opinion of the analyst. The justices ought to know upon what percentage he based his calculation. It was not as if water was a substance totally unknown in milk in its pure state.

Mr. Justice Kennedy concurred. The certificate was to give substantially the *data* on which the justices could act for themselves. It would be wrong to convict on a mere statement that there was 5 per cent. of added water. The analysis should be clear and afford materials on which the justices and the accused also might know how the results had been arrived at.

TO THE PREJUDICE OF PURCHASER.

A DECISION was given at Epsom last week in a milk case, dismissing a summons on the ground that it did not state

that the milk was sold "to the prejudice of the purchaser." A previous decision by a London magistrate to the same effect was quoted.

*COPPER IN PEAS.

THE prosecution, under the Sale of Food and Drugs Act, of Mr. Somers, a provision-dealer, for selling preserved peas containing $\frac{1}{10}$ gr. of copper per lb. came again before the Southwark Magistrate on January 22. At the previous hearing Dr. Leonard Wild, Dr. Waldo, Dr. David Somerville, and Dr. Heron were called for the prosecution, and the evidence went to show that copper was a cumulative poison, which, when taken daily for any length of time, would produce peripheral neuritis, causing paralysis of the extremities. Dr. Frederick Smith, Dr. Biss, Dr. Thos. Whiteside-Hine, and Dr. Walter Winter were now called on behalf of defendant, and all contradicted the evidence for the prosecution, stating that when the copper came in contact with the peas an almost insoluble salt, called "ferrocyanide of copper," was formed, scarcely any of which would be absorbed into the system during the process of digestion. In their opinion, if all the copper found in the peas were digested no harm would accrue. Dr. Hine stated that there was no properly authenticated case of chronic copper-poisoning on record, and when cross-examined by Mr. Dodd, who read extracts from various standard works, in which reference was made to "copper-poisoning," said that the authors were only "theorising," and challenged the counsel to find a passage in which either definitely alluded to a case of that disease that had come under their individual notice. Witness knew of lots of cases where much larger doses of copper than would be consumed with the peas in question had been taken continuously for months without any harm resulting. Although two million bottles of peas were annually consumed in this country, he had never come across or had known any medical man who had treated a patient who had been made ill through partaking of them. The last of the evidence was heard on January 29, Dr. Paul testifying for the defendant. Mr. Fenwick again adjourned the case to consider his decision.

COUNTY COURT CASES.

THE GOODS WERE RETURNED.

At the Bloomsbury County Court, on January 24, Messrs. Hockin, Wilson & Co. sued the Leeds Drug Company for 14s., balance of account rendered. Defendants pleaded that they had returned goods for this amount, and been allowed for them. The goods were returned on June 22. A servant of the Midland Railway Company proved the despatch and receipt of the goods, and the defendants put in a statement of the plaintiffs' showing that the amount had been allowed. His Honour gave judgment for the defendants, with costs, and railway return fare from Leeds.

CLAIM FOR CHEMICAL-FOOD.

In the Westminster County Court on Wednesday, Bovine (Limited) sued a Mr. Gould in respect of a quantity of patent horse-food supplied to the order of the defendant. The defendant said he objected to the plaintiffs' claim on the ground that their charge was excessive. They had charged him 24s. per cwt., and he contended that the price ought only to be 12s. His Honour, after hearing evidence, reduced the plaintiffs' claim by 1l. and gave judgment for 2l. 14s., with costs.

CLAIM AGAINST A CHEMIST.

In the Westminster County Court on Wednesday, in the case of Thorne v. Gilbert, the plaintiff sought to recover the sum of 3l. 10s. in respect of goods alleged to have been supplied about seven years ago to the defendant, who was described as a chemist of Birmingham. In answer to his Honour, plaintiff's solicitor said the claim was not barred by the statute, as the defendant had recently admitted his liability in a letter written to his clients. The defendant was not present to dispute the debt, and his Honour made an order for payment of the amount claimed, with costs.

*RESPONSIBILITY FOR GOODS STORED BY A RAILWAY COMPANY.

AT the Grimsby County Court, on January 21, before his Honour Judge Shortt, the Great Northern Railway Company sued Messrs. Williamson & Co., cattle-oil manufacturers of Grimsby, for rent for 9 months' storage of certain goods. Mr. Castle, of Horncastle, who gave evidence for the plaintiffs, said the goods were sent to him on sale or return, that he had returned them, and that the defendants refused to receive them. His Honour held that, no matter who was the real owner of the goods, Mr. Castle had no authority to make a contract with the railway company on behalf of the defendants, and he therefore found for the defendants, but gave leave to appeal, the cost of which, however, he thought the railway company should pay.

DAMAGE IN TRANSIT.

IN the City of London Court, on Tuesday, before Mr. Registrar Wild, Mrs. Annie Hill, lozenge dealer, 25 St. Peter's Road, Mile End, E., sought to recover 2l. 14s. against the London & North-Western Railway Company, for damage caused in transit to a parcel containing lozenges which was handed to them for delivery at Cardiff. Mr. Windsor appeared for the plaintiff, and Mr. C. H. Mason for the defendants. The plaintiff's case was that in September last two parcels, containing medicated lozenges known as Cubebic lozenges, were given to the defendants to be delivered by them to one of the plaintiff's customers, Mr. Adams, of Cardiff. Only one parcel arrived at its destination. The other, having been delayed in transit, was kept at the defendants' booking-office at Cardiff for four or five weeks. The plaintiff eventually discovered that Mr. Adams had only received one of the parcels, the other with $\frac{1}{2}$ -gross boxes of lozenges in it never having been handed to him. The defendants were asked to return the lozenges to the plaintiff, and that was done, but the parcel was so damaged that the plaintiff would not take it in. She now claimed for the loss sustained. The profit on the lozenges was 7s., but the cost of putting them into the boxes which contained them was about 2l. She could not say the exact cost of the lozenges to her, because she bought them by the cwt. The defendants had offered to pay 14s., but she had declined to take this. Mr. Mason, for the defendants, said that there had been insufficient packing. It was unreasonable, he urged, to ask a railway company to carry a parcel weighing 13 or 14 lb. when the goods were packed in flimsy cardboard boxes, and tied up with string. The plaintiff should have made good the defect and then charged the defendants with the loss and not have thrown the whole lot of goods on their hands. Mr. Registrar Wild said he thought the lozenges were badly packed, but as the defendants had admitted liability, he must find for the plaintiff. He would allow her 1l. 10s. Costs were also allowed.

FACTORY ACT PROSECUTION.

AT the Clerkenwell Police Court on Saturday, January 25, the Sharp Brothers Soap and Perfumery Company (Limited), of 18 and 19 Red Lion Square, Holborn, were summoned for that having opened a factory they did not within one month serve on the inspector under the Factory Acts a notice containing particulars as required by statute. Mr. Matthew Hale, solicitor, appeared for the company, and pleaded guilty to the offence. The company were further summoned for employing three women at overtime in excess of the number of times allowed by the Act. It appeared that the girls had worked more than forty-eight times from August December last, forty-eight being the maximum number of times allowed per year. Mr. Hale said there had been a transfer of the business and removal, and the new firm continued to send notifications of overtime with an indiarubber stamped notice upon them of the change of address, which was thought to meet the first summons. He also contended that the factory-inspectors ought to have seen from the notices that the overtime was being exceeded, and to have called the attention of the firm to the matter; but he believed the notices went to the workshops department instead of the fitting department. Penalties and costs amounting to 4l. 7s. were imposed.

UNSTAMPED MEDICINES.

In Dundee J.P. Court, on January 27, Thomas Morrison, medical herbalist, Hawkhill, was charged with three contraventions of the Medicine Stamp Act, 1802. It was alleged that on October 24, 1895, in his premises, he sold to James Joseph Leonard, Inland Revenue officer, a bottle containing "concentrated extract for indigestion," and a box containing "aperient pills," and on November 1 a packet of powders called "New Remedy for Stone in the Bladder," all of which were liable to stamp duty, without the necessary labels denoting the duty charged upon the articles. He pleaded guilty, and was fined 18s, with the alternative of five days' imprisonment. He was then charged with another contravention of the Act, by having sold a bottle containing "concentrated extract for indigestion" without having taken out the licence required by the Act. He was ordered to pay 6s., or undergo five days' imprisonment.

William Kershaw, chemist, Crumbles Street, Leeds, was accused of selling a box of "Beecham's pills," in his premises in Lochee Road, Dundee, on October 24 last, without having a licence. Kershaw failed to appear, but the charge was established, and a fine of 2l, with the alternative of ten days' imprisonment, was imposed.

Deed of Arrangement.

Cosbie, Charles Leopold, Medical Hall, Ballsbridge, chemist and druggist. Agreement for payment of debts in full, by eight equal instalments, at three, six, nine, twelve, fifteen, eighteen, twenty-one, and twenty-four months respectively; secured by joint and several promissory notes of debtor and trustee, and further secured by debtor covenanting to hand to trustee 2l. weekly until debts are fully satisfied. Trustee, Maurice Curtin, 73 George's Street, Dublin, tea-merchant. Dated January 14; filed January 17. Liabilities unsecured, 228l. 14s. 7d. The following are scheduled as creditors:—

	£	s.	d.
Ayrton & Saunders, Liverpool	36	11	1
Boileau & Boyd, Dublin	159	15	10
Harker, Staggs & Morgan, London	22	6	8

Gazette.

PARTNERSHIPS DISSOLVED.

Dugdale, W. D., and Densham, L., under the style of the Ultramarine Manufacturing Company, Poole, manufacturers of ultramarine polishing paste and other articles.

Trego, A., Hunt, G. S., and Smith, W. W., under the style of Tabor, Trego & Co., New Broad Street, E.C., and Bow, E., varnish and Japan manufacturers.

Wallace, R. U., and Hoskin, T., under the style of Wallace & Hoskin, Cravenhurst, Stamford Hill, N., and Amhurst Road, Hackney Downs, N.E., surgeons, apothecaries, and accoucheurs.

ADJUDICATIONS.

Brooke, Florence Mary (late wife of Mark Pearson Brooke, deceased), Nottingham, dentist.

Hale, Arthur, (trading as Arthur Hale & Son), Regent Street, W., medical galvanist.

Reynolds, Arthur Douglas (trading as A. Reynolds), Liverpool, surgical-instrument maker.

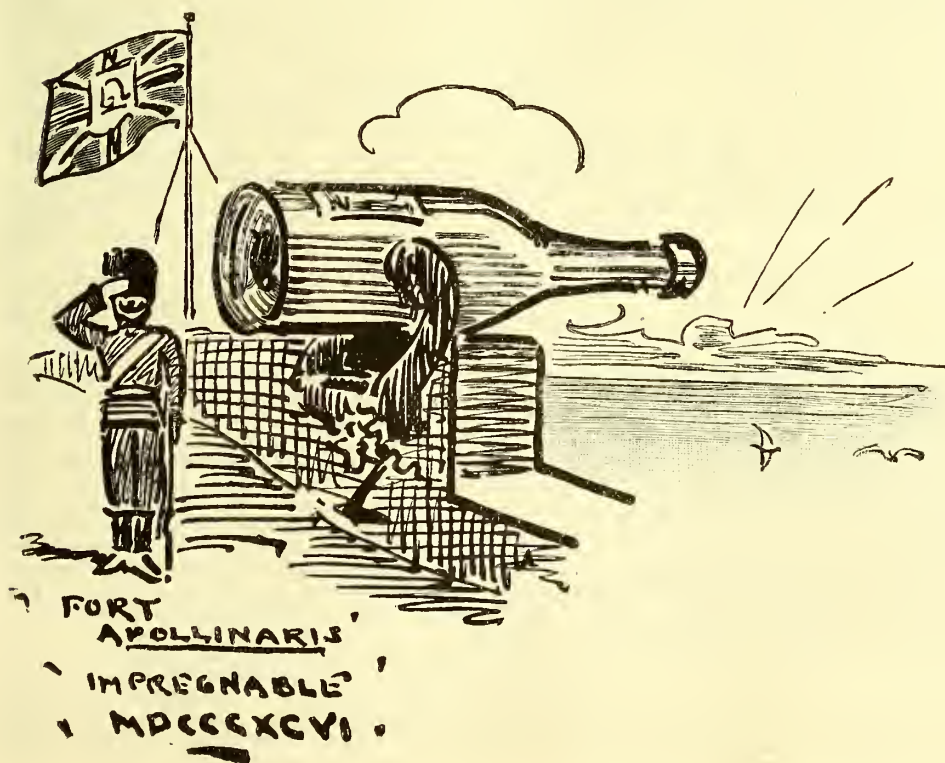
ADJUDICATION ANNULLED.

Heard, Edward, Golborne Road, North Kensington, S.W., surgeon.

ORDER MADE ON APPLICATION FOR DISCHARGE.

Greenway, James Riley, Tunbridge Wells, doctor of medicine—discharge suspended for two years ending December 19, 1897.

"THE CHEMIST AND DRUGGIST, of London, is," says the *Alumni Report*, "unquestionably one of the best pharmaceutical journals published. Bright, newsy, and 'up-to-date,' it stands in the very front rank of modern pharmaceutical journalism. But when it wanders into the field of American humour it evinces its English origin, as witnesseth the following abstract from its pages," and then the *Report* proceedeth to quote our little joke about Professor Remington being bloodthirsty, from which we have the consolation that the humour-blind faculty is the common inheritance of the Anglo-Saxon race.



THIS somewhat defiant sketch is a pen-and-ink drawing which has been made for the Apollinaris Company by Mr. Linley Sambourne, the eminent *Punch* artist. We believe this is the first time this sketch has appeared in any journal.

The Proprietary Articles Association.

AS we have reported on several previous occasions, an Association has been in course of inauguration having for its purpose the union of owners of proprietary articles with the wholesale and retail distributors of the same, which should discuss matters of common interest with a view of taking such steps as might seem advisable to deal with extreme cutting, and to prevent substitution. Mr. G. R. Barclay (Barclay & Sons, Limited) and Mr. Tebbutt (William Sutton & Co.) with Mr. Glyn-Jones, chemist and proprietor of the *Anti-cutting Record*, appear to have been the original promoters of the scheme. They found a very general desire among all sections of the trade to discuss the matter, and after two or three preliminary meetings, to which reporters were not invited, a first general meeting was called at Anderton's Hotel on Wednesday last, January 29, at 3 P.M. Among the firms represented at this meeting were Barclay & Sons (Limited), William Sutton & Co., W. Edwards & Son, Corneille David & Co., S. Maw, Son & Thompson, May, Roberts & Co., John Sanger & Sons, H. Brandreth (Homocea), Rowland & Son, The Chemists' Association (Limited), G. Nelson, Dale & Co., The Condal Water Company, Nortons (Limited), Whelpington & Son, Frame Food Company, Neave's Food, Garman Brothers, K. Sainsbury, Fassett & Johnson, Allen & Hanburys, Bovril (Limited), Powell's Balsam, W. Hayman, Joshua Barrett, William Johnston, Hirst, Brooke & Hirst, Leeds; Coleman & Co, Norwich; Morris & Jones, Liverpool; Alfred Bird, Birmingham; W. T. Owbridge, Hull; Cadbury, Birmingham. On the motion of Mr. Tebbutt, seconded by Mr. Gilligan, Mr. Geo. R. Barclay was elected to the chair, after which the Secretary read the minutes of the last meeting, held on December 13. A letter was also read from Messrs. Evans, Gadd & Co., of Exeter, saying they sympathised with the objects of the Association, as the proprietary business was not worth attention at the present unremunerative prices.

Mr. Glyn-Jones, the secretary, said that at the meeting held on December 19, a series of rules was drawn up to be submitted to the present meeting for modification or adoption as the meeting might think fit. In the meantime he had communicated with the majority of the important manufacturers and wholesale houses, and up to the present the following proprietors had joined the Association:—

Allen & Hanbury's (Limited)	Frame Food Company
Thomas Beetham, St. Helens	O. H. Maclean (Alcock's Plasters)
Bovril (Limited)	Rowland & Co.
H. Eraudreth, Birkenhead	Whelpington & Co.
Burroughs, Wellcome & Co.	Elliman, Sons & Co.
Cadbury Brothers, Birmingham	Mr. Hall (of Hall's Coca Wine)
Corneille David & Co.	Coleman & Co. (Limited), Norwich

The wholesale houses who had joined the Association were—

Barclay & Sons (Limited)	May, Roberts & Co.
Butler & Crispe	Maw, Son & Thompson
The Chemists' Association (Limited)	Morris & Jones, Liverpool
W. Edwards & Son	W. Sutton & Co.
Hirst, B. Coke & Hirst, Leeds	Sanger & Son

Mr. Glyn-Jones explained that it had been thought advisable to invite to this meeting those firms, who, though they had not yet subscribed to the Association, were favourably disposed to it. The meeting had been called primarily for the purpose of appointing an executive council, and to frame rules for the guidance of the Association. Of course it could hardly be expected that gentlemen who were not members of the Association should vote for the Council, or for laying down rules for the government of a body to which they did not belong; and they would ask that if any gentlemen present wished to vote they would previously intimate their intention to the secretary of joining the Association.

There was no response to this invitation, and the Chairman then proceeded to read the proposed rules *seriatim*. The first as drafted was

That the name of the Society be "The Association of Manufacturers and Distributors of Proprietary Articles."

The secretary said an objection to this title had been raised by the Midland Chemists' Association on the

ground that it was too cumbersome, and after some discussion an amendment was put to the meeting and carried that the title be altered to "The Proprietary Article Trades Association."

The title settled, the Chairman proceeded to read the subsequent rules, an occasional discussion intervening. As finally adopted, they stand thus:—

2. Objects: That the following be the objects of the Association:—

- The discussion of matters of common interest to the branches of the trades represented, with a view to decision, and, if necessary, concerted action;
- To take such steps as the Association may be advised are legal to deal with extreme cutting of prices, and to give advice and render assistance to its members in preventing substitution;
- To do all such other things as may appear to be of benefit to the trade.

3. Constitution: That the Association shall consist of manufacturers of proprietary articles, and of wholesale and retail vendors of the same, who give evidence of their being in sympathy with the objects of the Association.

4. Government: That the affairs of the Association shall be under the entire management and control of a Council consisting of thirty members.

That the Council shall comprise ten owners of proprietary articles, ten wholesale and ten retail vendors, each section of the Council to be elected by the members of the Association belonging to the three respective branches of the trade.

That no member of the wholesale or retail trade be eligible to sit on the Council as a representative of "owners."

That the election of the Council shall take place annually.

That the three sections of the Council constitute three committees, to whom matters particularly affecting either branch of the trade be referred; but any decision arrived at by such committee to be subject to the ratification of the Council.

That the meetings of the Council shall be held monthly, at such time and place as the Council may direct.

That all questions before the meetings of the Association, Council, or committees, shall be decided by vote, and that in the case of equality the chairman shall have a second or casting vote.

That the Council be authorised to make rules and regulations for its own government and that of the Association, and to annul or alter the same from time to time as occasion may require, subject to approval of a meeting of 5/5s. subscribers.

5—Officers: That the Council be empowered to elect the officers of the Association and to decide what shall constitute the various duties, privileges, and emoluments, in connection with such offices. That the officers shall retire from office each year, but shall be eligible for re-election.

6—Subscription: That the following be the annual subscriptions to the Association:—Owners of proprietary articles, 5 guineas; wholesale vendors, 5 guineas; retail vendors, 5s.

That the above subscriptions be due in January of each year, and if remaining unpaid after March 31, that the defaulting member's name be removed from the register of the Association.

In the course of the conversation which accompanied the reading of the rules, one gentleman in the room expressed the opinion that they might involve themselves in some personal liability, but he was told that he could not be liable beyond the amount of his subscription, and no legal steps could be taken without the consent of the whole Council. The rule concerning the government of the Association gave rise to a long discussion. In reply to a question as to how owners were to be distinguished from wholesale dealers, Mr. Glyn Jones explained that such a firm as Messrs. Allen & Hanburys were regarded as owners. The wholesale trade meant the wholesale distributors of proprietary articles.

Mr. Brandreth objected to the proportion of representation proposed to be given to the proprietors. He foresaw a great deal of friction if they carried out the proposal as it stood. Every proprietor who joined this Association had a great deal at stake, and the Association could not dictate to any one of them how he should carry on his business. Their

object, of course, was to gain the sympathy of the retail trade. They wanted to stop the retailers from substituting other goods for theirs, and shoving their showcards out of sight under the counter. They wanted all dealers to have a living profit on their articles, but it was the owners who were most seriously concerned in this matter. He should move, as an amendment, that all subscribers of 5 guineas should have a voice in the general council.

Mr. Tebbutt thought such a scheme would be unworkable, and it would give the owners a preponderating voice.

Mr. Brandreth said it would not be unworkable, as the General Council would appoint smaller executives; but by his plan no course of action could be adopted affecting the owners until every one of them had had an opportunity of considering it. The executive might be as small as they liked. An ideal executive was of three members with two absent.

After some further discussion, Mr. Brandreth's amendment, which was seconded by Mr. Norris (Coudal Water), was put to the meeting, and lost. The rule as it was originally proposed was then adopted.

On the last clause, fixing the rate of subscription, Mr. Norris asked how they defined a retail vendor.

Mr. Brandreth also asked whether a man who kept a retail shop and who had a proprietary article on which he turned over some 400% or 500% a year would be considered an "owner" or a "retail vendor." And could a man who spent 10,000% a year, and yet kept a retail shop, come in as a "retail vendor"?

Mr. Tebbutt said nearly all retail chemists had proprietary articles of some kind.

Mr. John Thompson said there were also many wholesale firms who also kept retail shops. How would these be regarded?

Mr. Brandreth instanced such firms as Duncan, Flockhart & Co., of Edinburgh, and Woolley's, of Manchester.

Mr. Glyn Jones said clearly the line would have to be drawn somewhere. He should say that if his article were worth the protection of the Association a retailer would come in as an owner.

Mr. Wm. Edwards, jr., said he supposed these knotty questions would have to be decided by the Council.

Mr. Brandreth said he supposed each firm would decide for themselves whether to come in as owners or wholesale or retail subscribers.

The Chairman said it had been thought that the first Council might be elected for three months instead of twelve, as firms who were not now members would be diffident in joining if they were to have no voice on the Council, and then at the end of three months a fresh Council could be elected. This was afterwards put in the form of a resolution, and carried.

Mr. Bird (Birmingham) said he would like to ask whether the Association had any scheme in contemplation. His firm had had some little experience of attempts which had been made. One, for instance, which had emanated from Mr. E. J. Smith, of Birmingham, had, he believed, been submitted to and discussed by the Grocers' Federation at great length; but that scheme for some reason or other had fallen flat. Mr. Smith's mode of procedure was that an association should be formed of the retailers, and that they should bind themselves not to sell below certain prices the proprietary articles or articles generally sold in grocer's establishments, and, if necessary, to put pressure upon the proprietary owners, telling them that if they did not maintain a certain level for the prices of their goods, the Association would refuse to sell their articles. For instance, if the proprietor of, say, "Brown's oatmeal" would not assist the retailers that article would be struck off the list, and would not be sold by anyone in the Association. That was practically a scheme of "boycotting," and it was not carried. Mr. Bird thought this was essentially a manufacturers' question. The co-operation of the retailer would no doubt be valuable, but if it involved disputes between them and the manufacturer and wholesaler, they would only lose time and do no good.

Mr. Glyn Jones said the committee who drew up the rules had considered whether they should lay any definite scheme before the meeting, but it was thought they could not at present go further than lay down a broad basis upon which the Association should be founded. Mr. Smith's scheme, he

said, commenced with the retailers' end, but they proposed to commence with the manufacturer. Mr. Smith's scheme failed because he proposed to include not only proprietary articles, but such things as eggs, butter, and bacon in his scheme. It would be the duty of this Association to try and show the manufacturer that it is to his interest to obtain the goodwill of the distributor of his goods. They had been in communication with the wholesale and retail trade during the past three months, and in a very short time they hoped to be able to show manufacturers that somewhere between 7,000 or 8,000 retailers were anxious and willing to maintain prices. He hoped such firms as Mr. Bird's would join the Association.

Mr. Brandreth here said it was the intention of his company (the Homoeo Company) to introduce from March 1 next an anti-cutting agreement on a rebate plan. They would charge 12s. 6d. for the article, and allow a certain discount to all vendors who would agree to sell at fixed prices.

Mr. Hirst (Leeds) said if such schemes as Mr. Brandreth's were multiplied, the labour for the wholesale houses would become intolerable.

Mr. John Thompson said his firm had joined the Association, and he had come to the meeting in the hope that some understanding could be arrived at between the manufacturers and the wholesalers and retailers, which would be satisfactory to all of them. His firm had expressed the views they held regarding anti-cutting schemes in a letter which appeared in the last number of THE CHEMIST AND DRUGGIST. He might say that they could not see their way to carry out schemes which involved the signing of undertakings between them and their customers. Of course, when Mr. Brandreth put his scheme in operation, this would involve the necessity of their striking Mr. Brandreth's goods off their list. That would not matter to Mr. Brandreth. He was quite independent of them, and he might say, too, with all respect, that they (Messrs Maw, Son & Thompson) were independent of Mr. Brandreth. It was utterly impracticable for a firm like theirs to carry out such a scheme as this. Their letters averaged some 600 or 700 every morning, and all these would have to be constantly watched to see if any of the protected articles were ordered in them. He would like to give an instance of the way in which these schemes worked. He did not know if Mr. Mellin was present. Apparently not. He had referred to this matter in his letter in THE CHEMIST AND DRUGGIST, already alluded to. [Mr. Thompson then narrated the facts which are given on a subsequent page under "Trade Talks"] His firm would never sign any agreements of the kind, nor would they ask their customers to do so.

Mr. Barclay hoped that they would have Mr. Thompson's advice on the Council.

The election of the Council was next on the agenda, but after one or two names had been proposed, it was ultimately agreed that all the 13 owners and 11 wholesale houses, together with every member who shall pay 5 guineas, should have a seat on the first Council. Mr. Barrow Cadbury, who was present, said his firm would rather not serve on the Council. It was also decided that 10 representatives of the retail trade should be elected from their own body.

The first meeting of the Council is to take place on Wednesday, February 12, at 3 p.m.

We are informed that Mr. Elliman has subscribed 100% to the funds of the Association, and that Mr. H. J. Hall, of Stephen Smith & Co., the proprietors of Hall's Coca Wine, has subscribed 10%.

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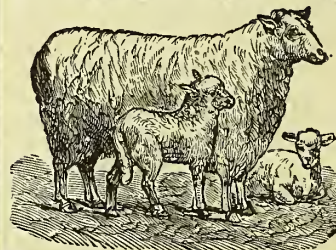
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THE PROPRIETARY ARTICLES
TRADE ASSOCIATION.

It was an influential meeting which met at Anderton's Hotel on Wednesday to formally launch the Proprietary Articles

Trade Association, though there were numerous conspicuous absences to be noted. Abundant evidence was afforded of the dissatisfaction which prevails all through the trade with the present conditions. Retailers have been discontented for a long time, and with plenty of reason. It is true enough, as has often been said, that no particular skill is needed to hand a labelled packet over the counter and receive so much cash in exchange. But to fit up and stock a shop, provide polite assistants, and place all at the service of the public, at an average profit of, say, a halfpenny per transaction, is a game which is hardly worth the candle, and one which will certainly not support the electric light of modern luxury. It is not at all surprising that chemists, at all events, have tried to use their special knowledge to somewhat better advantage than this.

The manufacturers at the other end of the business have come to feel the effect of the retailers' discontent. It is naturally irritating and alarming to them to find that the ultimate distributors of their articles are gradually becoming rather their enemies than their coadjutors, as they once were. The cutters—who at one time they looked upon as their particular friends, who they once thought were contented to sell just what they were asked for at the lowest rate of profit without a remark—it now appears, are the most eager of all to turn the demand for advertised articles to their own benefit; for in no establishments is substitution so systematically practised as in those company shops where "all patent medicines are supplied at the lowest store-prices." So the manufacturer is pining for the good old days when his preparation was kept in stock and treated with at least a benevolent neutrality "by all respectable chemists."

The wholesale distributor is, perhaps, the worst off of any of the parties. The pressure of the retailer, on the one hand, has squeezed his profits down in many cases to a hopelessly unremunerative 2½ per cent.; and the manufacturer, on the other hand, candidly tells him that his services to him are of comparatively little value, and does his best to cultivate direct relations with the retailer, if not with the public itself.

The three sections of dealers being thus united in their distress, the first necessary element of a successful combination is presented. The hour had come and the man appeared; the latter in the person of Mr. Glyn-Jones, a chemist in the East India Dock Road, who regards the remedying of the miserable state of things we have sketched as his special mission, and who is working his crusade with unquestionable energy and intelligence. He is backed by a few of the manufacturing and wholesale houses, who are heartily with him, and he can depend, we should think, on the moral, if not on the material, support of the majority of the retail trade.

So far things look hopeful. But it can hardly be said that the Association just formed shows anything like the same unanimity in the views of its members as to future action as they manifest in their complaints. If they could only all agree to leave the settlement of this question to what Mr. Brandreth described as an ideal executive—namely, a committee of three, with two absent—all difficulties could soon be surmounted; but, as in the days of Terence, so it is now—there are almost as many opinions as there are members. Evidence of marked divergence of views was forthcoming at Wednesday's meeting as soon as anything like detail was approached, and vigorous antagonism was only averted by a discreet reference of every knotty question to the Council.

Still, the formation of this Association, and the fact that a return to living profits is so much desired by everybody,

is a satisfactory sign. If no universally applicable scheme can be hit on, it may still be hoped that as a result of the consideration of the subject a few more proprietaries will be brought into line with those at present sold at protected rates, and gradually, perhaps, the owners of these will amalgamate their schemes.

Of course, the owners of proprietary articles can have no object in adopting these schemes, with their attendant labour and expense, except in the hope that they will thereby secure the goodwill of the retailers; and a murmur of surprise went round the room when it was incidentally mentioned that up to Wednesday last only sixty retailers had subscribed to the Association. We think it right to say that this fact really signifies nothing. The Association had not been really formed, and the proceedings of its promoters had been kept semi-secret until Wednesday. It may be taken for granted, we think, that the number then enrolled would not represent 1 per cent. of those who would heartily welcome some feasible plan whereby a reasonable profit and, if possible, a uniform price, for proprietary articles could be ensured. But the Association must produce its plan and show that it is likely to be adopted by a fair number of owners of proprietary articles, and that it is reasonable and workable from the retailers' point of view, before an enthusiastic support can be expected from retail vendors, whose interests have not been too scrupulously studied in the past.

THE NEW LIGHT--X, OR RONTGEN'S RAYS.

ANY doubt which may have existed regarding Professor Röntgen's discovery of invisible light-rays which penetrate wood and certain metals, as well as other substances, has been amply dispelled by corroborative observation in England, France, and elsewhere. To-day we are able, through the courtesy of the *Lancet*, to print a part of a hand in which the bones are seen distinct from the surrounding muscle. It is evident from this that the discovery may be of great value in medicine and the arts, but it is yet too soon to speculate upon that development of Professor Röntgen's observations. There is, however, enough of purely theoretical interest in it to occupy attention, while certain statements have been made regarding Professor Röntgen's observations which are quite erroneous, and require to be put aside before the importance of his research is properly appreciated. We, therefore, propose to describe as briefly as possible what Professor Röntgen has done in this department of research.

In the first place it should be noted that the new light, x , is not the old ultra-violet rays of the spectrum, nor is the light composed of the cathode rays which Lenard and others have previously experimented with and observed to be different in character from the ultra-violet rays. There is some confusion in regard to both of these hitherto well-known light-rays, and Professor Röntgen appears to have been careful in his observations to ascertain whether the light he was dealing with was identical with or different from these. His results point conclusively to the fact that though the x rays are associated with cathode rays they can be separated from the latter quite easily. The origin of the research was some experiments with high-vacuum tubes, which Mr. William Crookes has made familiar in this country by his work on the phosphorescence of the rare earths. These tubes are made in various shapes, but for the purpose of illustration we may take the glass bulb of an ordinary Edison-Swan electric light as typical of the whole. Suppos-

ing that both ends of the bulb instead of one terminate with the fused point of glass, and that through each of these we pass a platinum connecting-wire, we have a fair outside representation of a Crookes tube. Internally it is characterised by the vacuum being reduced to a fifty-millionth of an atmosphere, and it may or may not have some solid introduced into it before it has been exhausted. Suppose the bulb contain nothing, on connecting it with a strong electric current we may see nothing. If the terminals are sufficiently apart, but if the bulb contain, say, some ruby-dust we find that on electrical connection the dust exhibits a beautiful phosphorescent glow. This glow is, substantially, the invisible light-rays of the cathode made visible by the ruby-dust. Various substances have this property, amongst them the heavy earths and earthy sulphides. While experimenting with one of these tubes enclosed in a close-fitting shield of black paper, through which, by the way, the powerful light of an electric arc could not penetrate, Professor Röntgen observed that when he brought near it a piece of paper covered with barium platinocyanide the paper exhibited brilliant fluorescence. This happened in a dark room, and at a distance of $6\frac{1}{2}$ feet from the screened tube the fluorescence was still visible. Professor Röntgen's next step was to find if these invisible rays would pass through anything else than black paper, and, in succession, he put between his Crookes tube and the barium platinocyanide paper such interposing screens as a book of 1,000 pages, two packs of cards, tinfoil, blocks of wood, aluminium sheet, ebonite, glass plates, various fluids, gold, silver, copper, zinc, platinum, lead, Iceland spar, and many other things, and found that they were all more or less transparent to the x rays, although in some cases with increased thicknesses the substances became opaque. For example, the rays pass through lead-glass easily, and through lead-free glass they pass more easily, but given sufficient thickness of glass the rays do not pass through at all, which partly accounts for the statement that lenses are not required in "photographing" with the light. As a matter of fact, they are useless, because the light does not penetrate them. Aluminium is more transparent to the light than glass; in short, transparency decreases with increased density of the material.

So much for the transmission of the light. Before we speak of the "photographs" which have been taken with it it is necessary to call attention to Professor Röntgen's experiments, made with the view to find out whether the light could be reflected or not, and it is well also to point out that an ordinary photograph is the result of light being reflected from the object photographed, the rays of which are concentrated by the camera-lenses and thrown upon the sensitised plate. Photographs of that kind are, therefore, impossible with the x light, because it could not penetrate the lens. Moreover, Professor Röntgen made special experiments, and found that the light is incapable of reflection, while its refractive index is only 1.05, so that the light undergoes extremely little refraction in passing through prisms of ebonite and aluminium. That the light is not reflected is proved by the fact that it passes as easily through a mass of powdered metals as through solid metals of the same bulk. Ordinary light is reflected more completely by, say, powdered glass than by a piece of glass of the same thickness as the thickness of the powder. This point is such a well-known optical fact that it does not require elaboration. We may also mention here that cathode rays are deflected by a magnet. Professor Röntgen applied one to his Crookes tube, and found that the x rays were not deflected. Although parts of the cathode rays differ in susceptibility of deflection, Professor Röntgen

concludes that the x rays are not identical with the cathode rays, but are produced from the latter at the surface of the tube. This is a conclusion which may yet be modified when the professor's theory that the rays proceed in longitudinal lines, and not transverse waves like white light, is examined and corroborated. It is important to keep in mind the theory that matter as we know it does not occupy space completely, as the ether permeates all substances, and it is by the ether that light-rays are transmitted. Consequently longitudinal rays have a better chance of passing through a substance than transverse rays, which meet with many material obstacles in their up and down motion.

We are now in a better position to understand what Professor Röntgen's photographs are. Early in his research he observed that sensitised photographic paper became fluorescent like barium platinocyanide paper, but independently of that he pasted up on a sensitised plate superposed layers of tinfoil, and exposed the plate to the x light. On developing the plate it was found to present all the features of gradation of light which we expect to get with increasing degrees of opacity. Obviously, therefore, the sensitive plate is sensitive to the rays, and as these rays pass through materials with a perfection which varies with the material, if we bring such an object between a sensitive plate and the source of the light we get the shadow of the object printed on the plate, the more transparent parts allowing most light to pass through, so that on the negative these parts are densest and on the positive lightest. In the picture of the hand (which



is a positive) we see the bones most prominent because less of the x light has passed through them: they give a deeper shadow. Numerous objects have been so "photographed," and in all of them we get an image which is the expression of the transparency or opacity of the object. They are all on the flat—"shadow pictures," Professor Röntgen calls them most appropriately. If one has the x light available all that is necessary to get a picture is to put a sensitive plate in a dark slide (no camera or anything else is necessary), place the object on the dark slide or in front of it, and let the x rays play upon it for ten or fifteen minutes. On developing the plate the image is obtained. Some, perhaps, over-sanguine hopes are entertained about the applications of the discovery to the diagnosis of disease; for example,

someone has stated that by taking a "photograph" of a man's body a physician may be able to examine the inside of it. Whatever the future may add to our knowledge of the light, it is evident that at present our aspirations in this direction are higher than our capabilities. We must at present employ a sensitised plate the size of the object to be photographed, and that alone is an obstacle to the universal application of the process. Moreover, the object must be placed between the plate and the source of the light, and stand there for at least a quarter of an hour: there will be no snap shots. Limited as the applications of the process may be there can be no doubt that the discovery is one of the highest importance practically and theoretically, and its development may be a great gain to science and the arts. There is a disposition amongst very clever people to say that there is nothing new in it; that it has been known for years, Lerard, Abney, and others having been in the field before Professor Röntgen. However that may be, it is to Röntgen that we owe universal appreciation of the value of the new light, and we are not disposed to take away from him a particle of the credit which he deserves for the discovery.

Since the foregoing has been put in type we have received from our Paris correspondent a report of the meeting of the Academy of Sciences, held on Monday, at which several communications were made regarding the new light, which may conveniently be summarised here. The first paper was by Professor Lannelongue, which dealt with the discovery from the surgical-diagnosis point of view, and in this paper the Professor confirmed all that has been said regarding the use of the new light in localising bone injuries and diseases, and, what was of far higher importance, said that it even gives good results in diagnosing the area of tuberculosis in the hand. Following this, a photograph of a frog was exhibited, showing the circulatory system; then came M. Perrin, one of the demonstrators in the École Normale physical laboratories, who had repeated with rigorous criticism the experiments of Professor Röntgen, and corroborated them to the full. He has paid special attention to reflection and refraction of the light, and goes farther than Röntgen in regard to the latter, for he finds that there is none at all. He has also determined that the photographic plate is sensitive to the light at a distance of 7 centimetres, and beyond that the sensitiveness decreases. As to the identity of the x rays, M. Perrin said that there is no clear evidence that they are cathodic; and he shared Röntgen's view above noted, saying that there is no more identity between the rays than there is between the hammer that strikes the bell and the sound which it produces. After this communication came a startling one from M. G. Le Bon, who stated that he could do the same thing with ordinary light as was done with the x light. He took a sensitive plate, placed over it a negative, put them in a box the front of which was a plate of iron, and before the iron plate he placed an ordinary paraffin-lamp. In three hours he obtained a feeble negative, but with a light-tight box made of lead and iron he got a better negative in a shorter time. M. Le Bon's theory is that the whole thing is done by heat rays; nevertheless, when Professor Koelliker got up after him and proposed that the x rays should for the future be spoken of as "Röntgen's Rays" the meeting received the proposal with the heartiest acclamation.

MALARIA REMEDIES.

DURING the past ten days considerable attention has, in consequence of the death of Prince Henry of Battenberg, been given to malarial fever, and a good deal has been said

about the inefficacy of quinine. It is to be hoped that the greater attention now given in the leading medical schools to the study of tropical diseases may result in more precise knowledge of the malarial scourge, for there are yet several obscure points to be cleared up in regard to it. It appears, for example, to be quite obvious that we have no one specific which will at the same time ward off and cure the fever. We have heard that analgene has recently been tried in Italy with remarkable success, but no definite information has reached us. As regards quinine, Dr. George Thin, in a paper contributed to last week's *Lancet*, states in a convincing manner its efficacy as a prophylactic. He has proved the value of 5 gr. of the sulphate in solution daily, the bitter being taken two days before the person enters the malarial district and continued for ten days after leaving it. The rationale of this administration is that "the young naked spore of the malarial parasite is extremely susceptible to the destructive action of a minute proportion of quinine in the blood, and the greater the proportion of quinine in the blood the less chance of the malarial spore being able to live in it." Five grains a day in Dr. Thin's experience suffices, but he is open to correction on this point. This observation is one which travellers have proved by experience; but the really doubtful point is, Will quinine cure malarial fever? and the evidence seems to point to the fact that it very frequently utterly fails, even in large doses, to reduce the exhausting high temperature of the fever. When administered along with calomel it appears to be more efficacious. In this connection we observe several recent papers in which Italian and French observers have used phenocoll hydrochloride with great success. Dr. Righi of Padua, has tried it in 46 cases, giving 45 gr. per day, and in 10 only did it fail. Amongst the cases were 15 of quotidian type, of which 12 were cured by phenocoll, 4 having been already unsuccessfully treated with quinine. Of the ternary type 28 cases were treated, 21 being cured by phenocoll, 5 of which had resisted quinine administration. Only 3 cases of quaternary type were met with, all of which were cured by phenocoll alone. These observations have been independently corroborated by other observers, and the fact that the closely allied antipyretic, phenacetin, often lowers the temperature when everything else has failed, may also be taken to be corroborative of the phenocoll observations.

PHARMACEUTICAL EVENING MEETING.

We may remind metropolitan chemists that under the new arrangement the next evening meeting of the Pharmaceutical Society will be held at 17 Bloomsbury Square, W.C., on Tuesday evening, February 11, at 8 o'clock. The Secretary informs us that the first part of the proceedings that evening will be the formal transfer of the Burroughs Memorial Fund to the Council, it having been decided that the memorial shall take the form of a scholarship. Subscribers to the fund are invited to be present. Thereafter the following papers will be read:—(1) "The Detection of Aconitine," by Professor Wyndham R. Dunstan, M.A., F.R.S., Sec. Chemical Society, and Francis H. Carr, Salters' Research Fellow in the Research Laboratory of the Pharmaceutical Society; (2) "Essential Oils of Black and White Peppermint," by John C. Umney.

SEWER-GAS FATALITIES.

On Monday three men lost their lives at the Muspratt works of the United Alkali Company, Widnes, through suffocation by sewer-gas. One of the men entered the manhole of a sewer, and was clearing a way the refuse when suddenly he shouted that he was gassed, and at the same time fell into the water and liquor at the bottom of the sewer. His mate ran down the ladder to save him, but no

sooner had he succeeded in lifting the man out of the water than he was himself overpowered; and a third man rushed to his fate in the same way. It seems remarkable that this should have happened two days after the publication of a paper on this very subject, in which the cause of such fatalities has been clearly traced by Dr. John Scott Haldane (*Lancet*, page 220). By investigation of accidents in London Dr. Haldane has traced the cause of the fatality to sulphuretted hydrogen, the extreme toxicity of which he fully demonstrates. He says that "the presence of dangerous proportions of sulphuretted hydrogen in sewer air may be recognised by its irritating action on the respiratory passages and eyes, and by the discolouration of lead-paper. Catching of the breath and smarting of the eyes are signs of imminent danger. The sense of smell is not a safe guide. When very marked discolouration of lead-paper is produced within half-a-minute it is not safe to remain in a sewer unless a special respirator for absorbing sulphuretted hydrogen be used; even then 0.05 per cent. would soon cause intense conjunctivitis and photophobia. In cases of accidents from suffocative gases in manholes, wells, &c., a rescuer should never on any account go down without a rope round his own body. The best way of temporarily ventilating such places is to lower into them hot coals or other burning material." We mention this matter because it is not generally known that sulphuretted hydrogen is so fatal a gas to breathe.

Marriage.

MC SWEENEY—HASKINS.—On January 16, at St. Kevin's Church, Harrington Street, Dublin, Morgan A. McSweeney, L.P.S.I., to Mary, daughter of William Haskins, Pleasant's Street, Dublin.

Deaths.

AMES.—On January 1 at Bloemfontein O.F.S., Mr. John Charles Ames, pharmaceutical chemist. Aged 27.

BANKS.—On January 23, at Drewside, Bycullah Park, Enfield, Mr. John Banks, in his 60th year. Mr. Banks had been for many years the manager of the surgical-instrument department of Messrs. S. Maw, Son & Thompson's business. In this capacity he was very widely known



among surgeons, especially to those of an inventive turn of mind. These brought their crude ideas to him, and left him to work out the details and turn out the finished article. Mr. Banks was born at Hastings in 1836, and came into Messrs. Maw's establishment in 1852. He was engaged from the first in the instrument department, and of this branch,

which has grown with the rapid development of the surgical art, and with the rest of the business, he became a perfect master. He acquired a thorough knowledge of the requirements of the profession by closely following its literature and by personal attendance in the operating-theatre whenever the opportunity presented itself. Mr. Banks was much esteemed by his colleagues in the Aldersgate Street house, and by all who had business relations with him. He succumbed to an attack of rheumatic fever, with lung and kidney complications. His funeral on Wednesday at Finchley Cemetery was attended by Mr. C. T. Maw and by a number of those who had been associated with him for many years in the business. (A reference to Mr. Banks's successor as manager of his department in Messrs. Maw's business will be found under Trade Notes.)

DAVIDSON.—On January 11, Mr. W. Davidson, chemist and druggist. Aged 65.

* **FELLOWS.**—The Hon. James I. Fellows, formerly of St. John, New Brunswick, and late agent-general for that province, died on January 22, at his residence, Saxon Hall, Palace Court, Bayswater. Mr. Fellows had been settled in London since 1880, and was 67 years of age. He was born at Annapolis, Nova Scotia, on July 30, 1823, and was educated at Horton Academy, St. John, where his family had removed when he was eight. He served an apprenticeship with A. B. & D. Sands, Broadway, New York, and returned to St. John in 1847, and, along with his father, started a pharmacy there, and was so successful that in 1858 he sold out to a Mr. Barker, and put his money in a coal-mine. By 1863 the shares had dropped in value enormously, and he only



realised a fraction of his investment, but small as it was he ventured it in copper shares, which he soon realised, and that so well that he was able in 1864 to buy back his St. John pharmacy. When he returned to his dispensing-counter he was wrecked in health, which fact set him on the search for a good tonic. *Syr. hypophos. co.* was the result, but the search was a long and weary one, in which that peculiar personal knowledge which comes to persons of impaired health had an equal share with pharmaceutical skill. The syrup has since become world-famous, and Mr. Fellows had no doubt realised a handsome fortune out of its sale.

* **JARVIS.**—At Pau, Basses Pyrenées, France, on January 8, Anna Maria Paulina, the beloved wife of John Jarvis, English chemist. Aged 53.

WALKER.—On January 20, Mr. Benjamin Walker, chemist and druggist, Church Street, Tetbury.

RESINOL, although a common enough word, and a synonym for retinol, has been registered as a trade-mark in the United States by the Resinol Chemical Company, of Baltimore.

Trade Talks.

CHEMISTS' PROFITS ON DRUGGISTS' SUNDRIES.

MR. JOHN THOMPSON (of Messrs. S. Maw, Son & Thompson) has a very full acquaintance with all the details of the chemist's business, a keen interest in its progress, and a sound judgment in regard to it based on a long and varied experience. His comments on current topics are always interesting and to the point. Anti-cutting schemes formed the subject of a recent conversation with Mr. Thompson, and the letter which we printed last week from his firm indicates the views he holds. One of the side issues raised in the course of the talk was the lack of uniformity in chemists' prices. Mr. Thompson said:

"Here are some illustrations which have come before us lately, and which I have put aside to show you. They are exceptional, no doubt, when compared to the great mass of chemists' charges; but instances come before us frequently enough to show that there are still grounds for complaints of extravagant prices, and consequent justification of what is called 'cutting'."

"All these," continued Mr. Thompson, as he spread out a dozen or more articles, not quite in their pristine beauty, "are goods which for some reason or another have been returned to us by our customers. I am not going to tell you whom they come from; indeed, I do not know myself without inquiring. But the selling-price is, in every instance, the chemist's own marking."

The collection included (we quote the worst cases) a spray-producer, the cost of which was 1s. 4d., marked at 3s. 6d.; an odorator, cost 1s. 8d., marked 4s. 6d.; a feeding-cup cost 6d., priced for retail at 3s.; a shaving-brush, cost 1s. 8d., to be retailed at 3s. 6d.; and chest-protectors, cost respectively 7½d., 10½d., and 1s. 2d., marked to sell at 1s. 6d., 3s., and 3s. 6d.

"No wonder," remarked Mr. Thompson drily, "they want clean labels for some of these things." Then Mr. Thompson told a quaint story of the parturition in one of the historic pharmacies of the Kingdom. The old gentleman, who is long since dead, had very strict notions as to the exact limits of profit which ought to be allowed on sundries. It was the practice of his firm to price everything at 50 per cent. above cost. Articles costing 8s. per dozen were charged 1s. retail, and so on. Mr. Thompson went on to say:

"I remember once telling him that we had reduced the price of some articles from 8s. to 7s. 6d. per dozen. He made quite a trouble about it. How could he put 50 per cent. on 7s. 6d.? I told him he might as well take the additional profit. No, he said; that would not be in accordance with their system. Then I offered to keep the prices as before. But that he was not inclined to accept. I forget what was the result; but I suppose, like many other difficulties, this one settled itself at last."

Reverting to the subject of anti-cutting schemes, Mr. Thompson was asked a question about the firm referred to in his letter, who had asked them to sign a form refusing to supply a good customer who was alleged to have "cut" the article, but who had never bought a single packet of it from them. Messrs. Maw refused to do this, and the manufacturer in turn refused to supply them with his article.

"There is no secret about the affair," Mr. Thompson said. "The article referred to was Mellin's food, and to show the spirit in which the scheme was carried out I may mention a circumstance which has occurred since our letter was written. We had last week an order from one of the principal London hospitals, in which one of the items was 1 dozen Mellin's food, 2s. 6d. size. I wrote personally to Mr. Mellin asking him to let us have these, explaining for whom they were, and pointing out that no possibility existed of this transaction interfering with his anti-cutting scheme. Mr. Mellin refused to supply us. Now, although, through the peculiar circumstances of our business we do not see our way to assist in carrying out such a scheme as Mr. Mellin's, we have never in the slightest degree opposed it, or any other which has been adopted, and we can hardly think that the ultimate object of these schemes will be promoted by the infliction of petty annoyance or inconvenience on such firms as ours, who are, at least, neutral, and claim to be friendly."

CONCERNING KINGS AND CATS.

Keen naturalists have observed (my scientific colleague tells me) that the chief difference between the cat and the dog is that the last-named attaches himself to persons, (because, said Goethe, the dog, like man, is a pitiable scoundrel), whereas in pussy place-affection is specially developed. The case of the "Old Civet Cat" curiously corroborates this observation, and will probably be extensively quoted by the Buffons and Darwins of posterity. I don't know in the least why the "Old Civet Cat" has been removed (and I am therefore justified in blaming the Loudon County Council for the iniquity), but I came across her in St. Martin's Lane the other day. There was no mistaking her. No such creature ever existed outside the *Æsop's Fables* or the pages of Goldsmith's "Natural History," and there never can be another such. She has a snake-shaped body, a monkey-like tail, and a sugar-loaf head ornamented with whalebone-whiskers. It is said that Hogarth painted her, and was unable to tell, after having perpetrated the deed, what animal his picture represented. The creature's extreme want of migratory habit is shown by the fact that for 156 years she has tenanted 17 Cockspur Street, while before that time she was established at Long Acre, within a stone's-throw of her present and late habitation, for a term to the end of which the memory of man runneth not.

The gentleman who is the "Civet Cat's" present proprietor was busy in his office hanging up a lot of age-stained warrants, appointing his predecessors in the firm of Bayley & Co., perfumers to various members of the House of Hanover. The oldest of these heirlooms, dated June 26, 1792, makes Bayley & Lowe perfumers to their Royal Highnesses the Duke and Duchess of York. The male member of this couple is the worthy whose column stands in Waterloo Place, and whose military reputation is sunk in the swamps of Walcheren. Then, on June 9, 1795, Ann Townshend, "by the Power vested in Me," conferred upon Bayley, Son & Lowe a similar office on the staff of the Princess of Wales, and in 1830 the "Gentleman Usher Daily Waiter" to H.M. William IV. exalted Wm. Blew and John Henry Chapman to the place and quality of perfumers to H.M. "with all the rights, profits, privileges (*sic*) and advantages thereunto belonging." The last warrant is to the present Prince of Wales.

"Such intimate connections with the reigning house should enable you, Mr. Bayley, to give me some interesting reminiscences on, say, 'The Toilet-secrets of the Guelphs.'"

"So I could, but our old letter-books and ledgers have not yet been arranged after their removal," said Mr. Bayley—which was, perhaps, a diplomatic way of preventing revelations of State secrets in the *C. & D.* "Here, however, are one or two Royal relics. This is George IV.'s snuff-box. Take a pinch? Excellent, isn't it? Old Bayley used to go down to Windsor regularly to take the Royal orders—snuff, wig-powder, soaps, and 'Ess. houquet,' which was the King's favourite perfume, and is still one of our leading specialties. When ushered into the Royal presence, old Bayley used to approach the King holding out his inlaid snuff-box, into which the monarch dipped his fingers as a mark of grace. At the end of the audience George IV. returned the compliment by offering my predecessor a pinch from his own Royal box."

Mr. Bayley then produced an old bottle marked "Marchalle," in which the King's wig-powder was kept—a bottle still holding a fragrant dark-brown substance, and afterwards pointed out other similar curiosities. "The Speaker's Mixture" is a perfume specially made by the present proprietor's predecessor for the late Lord Eversley (Mr. Speaker Shaw-Lefevre), who wanted a scent all to himself, perhaps to keep him from dozing off during slow debates.

"And do you know," said Mr. Bayley, as I took my hat, "that ours was the firm who introduced blacking in cakes? That was about 1750. We then obtained an army-contract for our invention. The War Office took over 4,000l. worth a year, as our books show. You'll see those books another day."

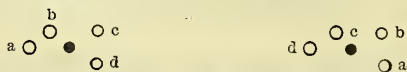
DEHYDRATED LARD.—Mr. Frank Edel, writing to the *Bulletin of Pharmacy* mentions that there are several brands of dehydrated lard in the American market which are much superior to the products usually employed.

Helmholtz Memorial Lecture.

PROFESSOR VON HELMHOLTZ, the distinguished German physician and physicist, whose death the scientific world mourned last year, was an honorary Fellow of the Chemical Society, and in 1881 delivered the Faraday lecture, which is the highest distinction the Society can confer upon anyone in life. A greater honour remains for bestowal after death, and that the Society on Thursday evening of last week paid to Von Helmholtz's memory in selecting Professor G. F. Fitzgerald, F.R.S., of Trinity College, Dublin, to lecture upon his life and work. The attendance was exceptionally large, many distinguished men of science, apart from chemists, being present. Mr. Vernon Harcourt occupied the chair, and, this being an extraordinary meeting, the customary formalities were dispensed with. Professor Fitzgerald's first sentences indicated to the audience that they were to get a treat, for they were poetic in diction as they were sonorous in utterance, and although the ideas were not new—indeed, they were hackneyed—they were put in a fresh way, and they were sympathetic hearers who heard the Irish scientist declare that Charles Darwin had helped accurate observation more than any man since the time of Copernicus. Then he touched upon Von Helmholtz's home life, showing that the manner in which he was allowed to experiment by himself prepared him admirably for his University education, as it made him feel that the new facts with which he became acquainted were not discoveries by him. It thus happened that when as a young man he wrote his thesis on "Conservation of Energy" which astonished the world, he had no idea that he was throwing new light on the subject. The cold reception of his views in Germany gave Professor Fitzgerald an opportunity of referring to the strange bigotry which characterises German metaphysicians in spite of their reputation to the contrary, and it was the warm reception which Helmholtz's views received in England which gave him encouragement to proceed. As a professor he gave his students research-work which he knew would yield them results, himself taking those subjects which might lead to nothing. Indeed, he was peculiar also in regard to appreciation of his own work, and it was not that for which he became famous that he had the greatest liking for, as he always esteemed most highly his investigations regarding fluid motion, the outcome of which was the

VORTEX THEORY OF MATTER,

now generally associated with the name of Lord Kelvin. This, as it happens, is the subject touched by him which has the closest relation with chemical matters, and for that reason Professor Fitzgerald took it as the principal topic of his discourse. His remarks were an admirable example of the necessity for chemists not being allowed to think by themselves in regard to the constitution of bodies, as thereby they may overlook laws in other departments of science which nullify chemical theories. For example, the vortex theory assumes that matter in its atomic state is energy in constant motion in the form of a vortex ring. It has been proved experimentally that the vortex can be modified in form, drawn out, twisted, and so on, without disturbing its motion or the direction thereof. Further, it has been proved that six vortex rings can be brought together, and remain in association as individuals without disturbing the motion, but seven rings, or any greater number, cannot be so brought together. This may be taken to coincide with chemical bonds, as we do not require for the theory of valency more than six bonds for any one element. It may also be squared with the theory of the asymmetric carbon atom, necessary for the explanation of the existence of dextro- and levo-tartaric acids, as we can imagine the rings in, say, CH_3 , being so placed that we should have motion to the right or to the left. For example:—



Here the black dots represent carbon, and the open circles hydrogen. The reverse position of the hydrogen on the right hand figure indicates the possibility of asymmetry. But when we apply the fact, of more than six vortex rings

moving together being impossible, to the benzene ring, C_6H_6 , we see that such a molecule cannot exist according to the vortex theory. Again, in such a molecule as alcohol, $\text{C}_2\text{H}_5\text{OH}$, it may be admitted that it is like the water-molecule, C_2H_5 , taking the place of an H, and on that supposition the molecule seems feasible; but the trouble is that the C_2H_5 group is imbued with seven times more energy than either the hydrogen or the oxygen, and it is inevitable that in motion in space such a molecule would be ruptured—the C_2H_5 would simply run away from the H and the O. These considerations led Professor Fitzgerald to the conclusion that the vortex theory is useless to chemists, or chemists must make their theories conform to it; but all his remarks were directed to show that the theory is wrong. In an intensely amusing passage he declared that the liquid within the ring must always move in one way, and he pictured the ring being drawn out, bent upon itself, twisted, made into a veritable tangle, a tangle that would do well enough for an atom, but would utterly confuse all physical observations and reduce chemistry to mere guesswork. Perhaps, however, it is by the creation of such tangles, said Professor Fitzgerald in a witty aside, that the ether has been made. Reference was next made to Helmholtz's work in thermodynamics, and taking up a suggestion which he had previously made that positive and negative carbon atoms are a necessity for the atomic theory, he proceeded to speak of

ELECTROLYSIS.

Any theory of atoms which does not explain electrolysis cannot be accepted, and Helmholtz, recognising this, followed up Faraday's work, and laid the foundation of the remarkable developments which have been made by the Dutch School during the past decade. These very developments, however, show how important it is that mathematicians should be associated with chemists in their researches, as chemists are apt to allow an idea to run away with them, even mixing up kinetic conditions with static possibilities, and evolving laws wholly contradictory in themselves. These ideas were admirably expounded in a learned synopsis of the theories of solution. The ionisation theory predicates that the molecules in a liquid are in the same condition as in the gaseous state, a statement which the lecturer could not accept. The argument of the ionisation theorists is based chiefly upon the osmotic pressure exerted by the dissolved substance acting upon an artificial membrane. Professor Fitzgerald spoke contemptuously of the membranes selected, and recommended chemists to study the action of solutions upon a diaphragm consisting of non-wettable material, such as paraffin, pierced with innumerable capillary holes. If such a diaphragm be placed in a jar, the lower part of which contains water, and the upper part a saline solution, there is no passage of the solution downwards, but it depresses the capillary column of air thus $\left| \begin{smallmatrix} \text{ } \\ \text{ } \end{smallmatrix} \right|$, and the measure of that is the osmotic pressure, between which and capillarity there is a connection. Although the solution cannot pass downwards, there is a free passage of water as vapour up and down. The existence of free ions in solutions was referred to in a sceptical tone. We know that the molecules are composed of negative atoms and positive atoms, and if we assume, as the theory requires, that one + atom travels away from its — neighbour, we at once disturb the electric equilibrium, and as we are dealing in this matter with a force equal to 400 000 volts per centimetre, the very condition which is supposed to be set up would result in decomposition of the liquid, and such manifestation of electrical force that could not have escaped observers. Professor Fitzgerald strongly condemned the theory, which he considered to be dangerous, because it gave chemists the feeling that everything was explained, and this prevented them seeking the truth. He also stated that the explanations of ionisation theorists are exceedingly ingenious, but when we examine them we find that they are another way of stating the thing objected to. Thus their explanation of solution in water really amounts to the same explanation as the hydration theory. He then enlarged upon the relations between electricity and matter, pointing out the probable rich rewards of fact which may follow closer research in this field, and referred briefly to Helmholtz's physiological researches.

The lecture throughout was of a highly suggestive character, and we have merely skimmed the surface of it

for the facts which may induce those interested to carefully read the lecture when it is published in the Society's *Transactions*. If there was one thing more than another that Professor Fitzgerald succeeded in demonstrating, it was that a correlation of students of force is a necessity in the search for truth.

VOTE OF THANKS.

Sir Joseph Lister, President of the Royal Society, in proposing a vote of thanks to Professor Fitzgerald, confessed his inability to follow him in most of his remarks, which were *terra incognita* to him, but he recollected with pride that Helmholtz was a medical practitioner. That from being such he should have become a brilliant physicist was a very remarkable fact. (Laughter.) He would have done enough to claim the gratitude of physicians and surgeons if he had done nothing else than explain the accommodative power of the eye to varying distances and invent the ophthalmoscope.

Dr. Edward Frankland seconded the resolution, and among the subsequent speakers were Lord Rayleigh, Sir Henry Roscoe, Professor Armstrong, and Professor Poynting. Lord Rayleigh mentioned that all the German he knew was learnt by reading a book of Helmholtz's thirty years ago.

In adjourning the meeting the President (Mr. A. G. Vernon Harcourt) mentioned that Helmholtz was half an Englishman, seeing that his mother was Miss Penn, an Englishwoman, who was connected with the family of the founder of Pennsylvania.

Professor Fitzgerald briefly replied.

New Companies.

HUGGIN'S SOAP WORKS (LIMITED).—Capital 50,000*l.*, in 5*l.* shares. Objects: To enter into an agreement with Henry R. Bullock, and to manufacture, buy, sell, and deal in (both wholesale and retail) soap, candles, tallow, oil, glycerine, paints, dyes, colours, varnishes, cement, fats, cattle food, &c.

*** CRYSTAL SEAL BOTTLE COMPANY (LIMITED).**—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the patent rights in connection with a certain invention, such patent being numbered 6,592 of 1894, and to manufacture, sell, and deal in the "Crystal Seal Bottle." Registered without articles of association.

NOTTINGHAM BOILER SCALE DISSOLVING COMPANY (LIMITED).—Capital 100*l.*, in 1*l.* shares. Objects: To enter into a certain undescribed agreement, and to carry on the business of manufacturers of and dealers in oils, vitriols, alkalis, and acids. Registered without articles of association. Registered office, 58 Canal Street, Nottingham.

DIGESTIVE SALT SYNDICATE (LIMITED).—Capital 10,000*l.*, in 9,900 ordinary and 100 deferred shares of 1*l.* each. Objects: To establish and carry on the business of manufacturers of and wholesale and retail dealers in digestive table salt to be called "Selvain" or any other name, and condiments, compounds, and preparations, and to carry on business as manufacturing and retail chemists. The regulations of Table "A" mainly apply.

*** SOKOL SANITATION COMPANY (LIMITED)**—Registered with a capital of 10,000*l.*, in 1*l.* shares. Objects:—To enter into an agreement with Jas. Wood and Capt. D. Shaw, trading as "Wood & Co.," and to acquire, take over as a going concern, and carry on the business of manufacturers of proprietary medicines known as "Sokol disinfectant," "disinfecting distemper," "Albion sheep-dip," and "swine-fever cure," carried on by Wood & Co. Registered without articles of association.

M. B. FOSTER & SONS (LIMITED).—Capital 300,000*l.*, in 16,000 5*l.* per cent. preference shares of 10*l.* each, and 35,000 ordinary shares of 4*l.* each. Objects: To acquire the business carried on by a company of the same name, to enter into an agreement with the said old company, E. Waterhouse and J. H. Foster, and to carry on the business of ale, beer and elder merchants, mineral and aerated water manufacturers, wine and spirit merchants, brewers, maltsters, &c. Registered office, 242 Marylebone Road, N.W.

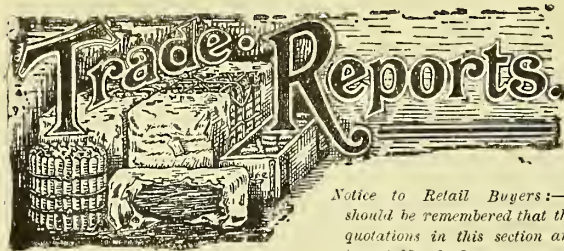
LEADBETTER'S DENTAL PATENT MANUFACTURING COMPANY (LIMITED)—Capital 15,000*l.*, in 1*l.* shares. Objects:

To acquire the business carried on at Manchester under the style of "Leadbetter's Dental Patent Manufacturing Company." Chas. S. Leadbetter is to act as the managing director for five years at a salary of 500*l.* per annum.

*** FREDERICK KING & CO. (LIMITED).**—Capital 50,000*l.*, in 10*l.* shares. Objects: To acquire from the liquidator of Frederick King & Co. (Limited) the lands, premises, machinery, plant, fixtures, stock-in-trade, debts, chattels, and goodwill of the business of the company as carried on at Ballyherly, Belfast, and London, and to manufacture, sell, and deal in preserved potatoes, desiccated soups, and other food preparations. The first directors (to number not fewer than two nor more than four) are William Wilson, Donald MacDonald, and William Chaine. Qualification, 300 shares. Remuneration, as the company may decide.

*** RUDDOLPH LABORATORY COMPANY (LIMITED).**—Capital 5,000*l.*, in 10*l.* shares. Objects: To acquire the business carried on as the Ruddolph Laboratory Company (Limited), at 29 London Road, Reading, to enter into an agreement with Wm. H. Sandwith, and to carry on the business of manufacturers of and dealers in drugs, chemicals, patent and other medicines, druggists' sundries, medicinal and chemical preparations, &c. The first subscribers are:—J. F. Sargeant, Holly Bank, Bracknell, solicitor (75 shares); J. H. Knowles, Kendrick View, London Road, Reading, chemist (25); Wm. H. Sandwith, Bracknell, chemist (25); Jno. Tyrell, Bracknell, traveller (25); G. Haye, Wokingham, solicitor (5); B. P. Alluett, 2 Forbury, Reading, chartered accountant (1); F. J. Griffin, Shenston Road, Reading, manager (1). The first directors (to number not fewer than three nor more than seven) are John F. Sargeant, John H. Knowles, and Wm. H. Sandwith. Qualification, 250*l.* Remuneration, as the company may fix.

"THE HORRORS OF SHEEP DIP."—It is thus that the *West Ham Herald* heads an article in which we are informed that there are two or three factories near the southern border of West Ham where sheep-dip is made. A representative of the paper has been inquiring about it, and this is what he says:—"The materials used in the manufacture are caustic soda, sulphur, and red and white arsenic. The men wear overalls of brown holland, and before they can go near the chemicals their faces have to be enveloped in silk handkerchiefs, leaving only their eyes uncovered. At the end of the day's work you see them coming away with their eyes in a horrible state—literally bunged up with inflammation and impurity. First of all the ingredients have to be stirred about briskly in large open vessels, and the operation produces clouds of steam, which is so heavily charged with poisonous fumes that the visitor, unused to breathing such stuff, sneezes and splutters at the first whiff of it. The men, however, have to work in it all day long. They themselves say that the last process is by far the worst. . . . The compound has to be ground and passed through a sieve, and it must be as dry as possible before this can be done. When it has gone through the sieve the powder comes down a kind of shoot, and if there is a current of air in the room it blows the fumes and the powder into the men's faces and on to their clothing directly they open the shoot doors. The men are not forced to work fast. Indeed, they are warned not to exert themselves enough to bring on perspiration, for then the powder will hold to the skin and eat into the pores. When the powder gets into the pores it causes violent itching, but woe to the man who scratches his skin! So much do the men dread the effects of the powder upon their faces that they cover themselves with fuller's earth before they begin their work. . . . About twenty men and boys are engaged on this work at one factory, and only a few of them can keep on at it every day. They are frequently laid up, some for weeks at a stretch. Indeed, the proprietors of the place are continually taking on fresh men to fill the places of the victims. . . . The employers comply with the provisions of the Factory Acts in regard to dangerous occupations. But it is evident that if the manufacture of this sheep-dip is so deadly, even after all Home Office precautions are regarded, as to shorten the span of human life to five years, the manufacture ought to be prohibited altogether. . . . The men receive 26*s.* a week!" The *Daily Chronicle* supports the *Herald* in demanding the interference of the Home Office.



Notice to Retail Buyers:—I should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large

quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable even for manufacturing purposes. Further points which should be borne in mind are that distributor generally has to bear the bulk of the freight-charges on the goods on their way from the producer to the retailer, and that for many articles the range of quality is very wide.

42 CANNON STREET, E C, January 30.

WITH the exception of some four or five articles, in which there have been important changes, the markets have shown few alterations, although a steady trade is quietly going on. In fine chemicals the principal alteration we have to report is a decline of about 40 per cent. in pilocarpine. Quinine is dull of sale, and perhaps a shade easier. Sugar of milk retains its high quotations, although the range was rather wide. Arsenic is still extremely dear, and practically unobtainable on the spot. Citric and tartaric acids firm, especially the last-named. Chrysophanic acid quiet. Refined camphor is tending somewhat easier, but cream of tartar is again considerably higher. Glycerine somewhat slow of sale. Opium salts are at present unchanged, but may go up if the movement in opium should make further progress. In drugs we have to report rather a firm market for opium. Raw camphor was sold to a considerable extent at rather easier rates. Balsam Peru is quiet. Cascara sagrada, in spite of important arrivals, keep steady. Cevadilla seed much higher. Colocynth keeps steady. Ergot of rye unchanged. Malta cummin-seed slightly easier. The price of gentian-root is well maintained, and looks like going higher still. To-day's gum-acacia sales went off very flatly. Soudan sorts are in large supply, and tending rather lower. Barbary gum, however, was in demand. Menthol slow of sale. Castor oils, Italian and French, are very firm. It looks as if the price of cod-liver oil were about to advance. In essential oils there are few changes. Otto of rose very firm. Citronella, lemongrass, and cassia oils are well maintained. Tragacanth keeps high in price for fine qualities. Saffron is also firmer. In heavy chemicals we have to report steady prices for sulphur and an improved demand for sulphate of copper, green copperas and baryta salts. Chlorate of potash is tending firmer, but acetate of lead is slow of sale. Potashes and sodas generally are steady. Spices slow of sale, Jamaica ginger being decidedly easier. Turmeric is very slow, but shellac keeps steady for orange, while bntton lac has made some advance. Quicksilver dull of sale. Galls are rather easier for Chinese. Indigo about 2*d.* dearer. The position of oils is as follows:—Linseed steady, at 19*s.* 9*d.* to 20*s.* 3*d.*; rape oil firm, at 23*s.* 9*d.* to 24*s.* for crude, and 25*s.* to 25*s.* 6*d.* for refined. Cotton seed tending lower; crude, 15*s.*; refined, 17*s.* 6*d.* to 18*s.* Cocoannt oil unchanged: fine Ceylon, 22*s.* 9*d.* to 23*s.*; Cochin rather firmer, at 27*s.* Palm oil lower: 22*s.* for fine Lagos. Olive oil unaltered. Turpentine is slightly lower. Petrolenm easier. German potato spirit has slightly advanced.

Methylated spirit has been advanced 1*d.* per gallon. The Bank rate remains unchanged at 2 per cent., and bar silver is slightly firmer at 30½*d.* per oz.

Our Smyrna correspondent, telegraphing on Wednesday afternoon, reports that the market is excited on account of severe frosts which are said to have occurred in the growing districts. Speculators have been buying freely up to the parity of 7*s.* 8*d.* per lb. f.o.b. Smyrna for fair current manufacturing gum, which is an advance of 1*d.* upon the quotations of a fortnight ago.

Last week the whole of the workmen, numbering 300, at the Globe Works, of the United Alkali Company, at St. Helens, received notice. It is understood that the furnaces will be cooled down, and the works brought to a standstill, for at least several weeks. Bleaching-powder forms the chief product of the "Globe," and the stoppage of the works has been necessitated by the enormous accumulation of stocks.

About a year ago Mr. Thomas Christy exhibited at an evening meeting of the Pharmaceutical Society an advance sample of astringent "gum" which he had obtained from the Zambesi district. In this "gum" Mr. E. M. Holmes recognised the old-fashioned kino, which Dr. Fothergill introduced into therapeutics more than thirty years ago as a West African remedy. Mr. Holmes would not pledge his word to the sample being the same as the old kino until he had seen more of it and specimens of bark, flowers, &c., which have now been obtained, with the result that he declares the "gum" to be the true kino, the inspissated juice of *Cocoloba uruphera*. We have examined this kino, of which Messrs. Thomas Christy & Co have obtained a consignment of about 100 lbs. It is a beautiful, reddish-brown inspissated juice, of great astringency, and forming an excellent tincture. It may be explained that the various products which have passed as kino during the long period that this Cocoloba kino has been unobtainable have little in common with, the result being that most retail pharmacists regard kino as a glistening black "gum," from which physicians do not get the results that the text-books say, because, of course, the books are written upon the old experience with Cocoloba kino. Now that this drug is available, there appears to be a desire to give it a good trial, for it is being bought up by wholesale houses, and Messrs. T. Christy & Co. have arranged for regular supplies. The price for retail lots is 18*s.* 6*d.* per lb.

ACID (CARBOLIC).—Firmly held at 7½*d.* for 39° to 40° C. and 6½*d.* to 6¾*d.* for 35° C. for crystals. For crude acid 75 per cent. 2*s.* 1*d.* per gallon has been paid, and it is said that in 60 per cent. business has been done at 1*s.* 10½*d.* per gallon.

ACID (CHRY SOPHANIC) may be had from English manufacturers at 21*s.* per lb.; fine workable *Goa powder* is as scarce as ever, but the demand for it and for the acid has been very slack of late.

ACID (CITRIC).—Firm and fairly active. There seems to have been an especially good demand on the Continent lately, more so than in this country. The English makers quote 1*s.* 2½*d.* per lb. on the spot; second-hand holders still offer at 1*s.* 2¼*d.* per lb. Concentrated lemon juice is also firmer; up to a few days ago 13*l.* 15*s.* per pipe, f.o.b., was still quoted, but we hear on good authority that within the last four days 14*l.* 2*s.* 6*d.* has been paid.

ACID (TARTARIC).—Very firm indeed. English is quoted at 1*s.* 3½*d.* per lb. by the makers, while second hand holders ask 1*s.* 2¾*d.* per lb. Foreign makers are asking 1*s.* 3*d.* per lb. for early delivery.

ARSENIC.—The price for immediate delivery is quite nominal at 18*l.* per ton for white powder. In all probability, however, some supplies will be obtainable at that figure in about a fortnight's time.

BALSAM PERU.—Tending lower. To-arrive business is said to have been done at 8s 9d. per lb. c.i.f., but on the spot that figure, we believe, would also be accepted.

BENZON.—Firmly held for all good and fine qualities of *Sumatra* gum, for which there is a steady demand.

BLEACHING-POWDER is 7l. 15s. per ton on the spot, while the quotations ex Liverpool and the Tyne are 7l. f.o.b., or 6l. 10s. f.o.b. for shipment to the Continent.

CAMPOR (CRUDE).—This article has attracted much interest this week, and a good deal of mysterious buying is reported. It is almost impossible to obtain reliable details; but it seems that between last Friday and yesterday from 800 to 1,000 piculs of *Formosa* camphor changed hands at 152s. 6d. per cwt. c.i.f. terms for February-April shipment, a decline of about 10s. on the reduction of the preceding week. It is said that this camphor was purchased by the Syndicate, but we believe that several refiners have also taken advantage of the lower quotations to lay in supplies. To-day the tide has turned again, and the market closes firmer. Business is said to have been done at from 153s. to 155s. per cwt., c.i.f., and 156s., c.i.f., is now asked. *Japanese* camphor (which has been out of proportion dear compared to *Formosan*) was offered here yesterday in second hand, at 175s. per cwt., c.i.f., and could, perhaps, still be had at 177s. 6d. per cwt., c.i.f.; but it is said that in Japan the exporters demand 185s., c.i.f., and that they have formed a "syndicate" among themselves to keep up the market. It is reported that, a few days ago, 200 piculs Japan, near at hand, sold at 182s. 6d. per cwt., c.i.f.; but we cannot vouch for the accuracy of that report. The outlook seems extremely unsettled.

CAMPOR (REFINED).—No alteration has yet been made in the *English* official quotations. *German* makes are quoted on the basis of 2s. 2d. for half-ton lots of balls, for prompt delivery; for contracts for three and six months delivery 1d. more is asked. We hear that one of the German makers is soliciting bids at $\frac{1}{2}$ d. per lb. below the price quoted above.

CASCARA SAGRADA.—Remains firmly held, in spite of the fact that a parcel of about 500 bags has been received from America this week. It is reported that the bulk of this was sold before arrival, and that the chances are that little or nothing of the lot will appear in the market. Meanwhile sales of good quality have been made at 21s. and 21s. 6d. per cwt., and one dealer asserts that he has declined an offer of 22s. 6d. per cwt. for the whole of his stock. Others even talk of 30s. per cwt. as their asking-price.

CEVADILLA-SEED—This favourite article of Hamburg speculators has lately been advanced in price to 125s. per cwt., almost double the quotation of two months ago.

CHLORALAMID.—Up to the present time the price for this article has been 11s. per lb. for any quantity, but henceforth the agents will require 11s. per lb. for lots under 5 lbs., and 10s. 6d. per lb. for lots of 5 lbs. and upwards.

COLOCYNTH.—Still in very limited supply and held for extreme high prices: fine pale *Turkish* apple with seed at 2s. 10d.; good *Spanish* at 1s. per lb. on the spot.

CREAM OF TARTAR—Still rising. Best French crystals are now quoted at 102s. per cwt. f.o.b. Bordeaux, with every prospect of a further advance. In London business has been done in good white crystals at prices advancing up to 107s. per cwt. on the spot, and there are now no sellers below that prices while the quotation, for powder are 108s. to 110s. per cwt.

CUMIN-SEED.—Slightly easier: good *Maltese* seed has been sold this week at 33s. per cwt.

ERGOT OF RYE.—Quite neglected. New *Spanish* offers at 9d. per lb. on the spot for good quality, fine *Russian* or *German* at 6 $\frac{1}{2}$ d. to 7d. per lb.

GALLS.—*Japanese* are rather easier. Some business has been done for arrival, February-March steamer, at 51s. per cwt., c.i.f. terms, and there are further sellers at that figure. The last quotation for *Chinese* galls was 57s. 6d. per cwt., c.i.f., or 64s. on the spot.

GENTIAN.—Several tons of root have changed hands this week at the rate of 18s. 6d. per cwt., f.o.b. Marseilles, which is equal to nearly 22s. 6d. per cwt. London terms. On the spot, however, 21s. per cwt. has been accepted for good sound root, but there does not seem to be anything more at that price. *Gentian powder* is now quoted at 21s. 6d. per cwt. net, "c.i.f." terms.

GLYCERINE.—The manufacturers are very firm in their views, and have made no change in the quotations. Some second-hand holders, however, who have made cheap purchases at the time would be glad to make a reduction on the nominal market rates in order to realise. Business is quiet.

GUM ACACIA—Picked kinds are very quiet, the quotations for fine pale *Trieste* drop being from 12l. to 13l. per cwt. Grains have sold lately at 5l. 7s. 6d. per cwt. The market for *Soudan* sorts is tending downwards, and rather easier rates have been accepted for some parcels, fine soft pale sorts being now quoted at 60s. to 62s. 6d. per cwt. The supply is increasing constantly, and no sales of any importance could be effected except at much lower rates. In so-called insoluble *Persian* gum, fair sales of ordinary to good quality sorts have been made at from 12s. to 14s. per cwt. Best selected is quoted at 18s. to 20s. per cwt. Ninety cases *Brown Barbary* sold at to-day's auctions at from 30s. 6d. to 35s. per cwt., showing a steady markets.

HONEY.—Sales of brown *Chilian*, pile 4, have been made at 21s. per cwt.

INDIGO.—At the *East India* indigo-auctions held this week a fair demand prevailed and prices rose 2d. per lb. on the previous auction-rates for Bengal and Karpah. Good Oudes were also 2d. higher, common kinds unchanged. Madras and Bimlipatam firm to 2d. dearer.

IPECACUANHA.—Small sales of *Colombian* root are reported since the last auctions up to 4s. 3d. per lb. for good plump slightly-damaged quality. A parcel of twelve bales has just been received.

LEAD ACETATE.—The German Convention price for white sugar of lead is 23l. to 23l. per ton c.i.f. British ports, but certain outside manufacturers are selling slightly below that figure.

MENTHOL.—The position seems to be shaky. On the spot there is no alteration in the quotation, but we hear that for prompt shipment or parcels on the way, 12s. 3d. per lb. c.i.f. terms would be taken.

OIL (CASTOR).—The chief importers of French and Italian castor-oil are exceedingly firm in their views. Some of them, indeed, have again advanced their prices, but this increase is more or less nominal, for there are second-hand and other holders quite ready to accept last week's quotations. Reports from Calcutta state that stocks are small, and the supplies of seed insufficient to meet the requirements. The new season, however, opens early in March, and it is expected that prices may then be raised again. The quotation for first pressings *Italian* is now 31s. 6d. per cwt., c.i.f.; for second quality 31s. c.i.f. First pressing *French* oil is quoted on the spot at 22s., second pressings at 20s. 9d. per cwt., and medicinal oil, according to packing, at from 25s. to 28s. 6d. per cwt.

OIL (COD-LIVER).—The market has been extremely quiet since our last report. The fishing reports from Norway continue to be rather alarming. It is said that up to Mouday practically no fish had yet been caught in the *Lofoden* district, and the quotations for new oil were only nominal. Some importers in London go so far as to say that they would not enter into a contract for best new oil at as high a figure as 220s. per barrel, but on the other hand there seems to be no demand on the part of the drug-trade, and we think that good non-congealing 1895 oil can still be had at 165s. per barrel on the spot; for best *Newfoundland* oil, 5s. 6d. per gallon (equal to 137s. 6d. per barrel of 25 gallons) is asked on the spot, but that price cannot be obtained, and in Liverpool sales have been made at 5s. per gallon. The quotation for Jervell's brand non-congealing 1895 oil is 190s. c.i.f. terms. The market closes exceedingly firm on account of the bad fishing reports, and it is said that some parcels of new oil have been rejected by the buyers on account of deficient quality.

OILS AND SPIRITS.—German potato *Spirit* has advanced slightly within the past few days, the present quotation being from 6½d. to 7½d. per gallon (in bond) naked, c.i.f., according to brand. *Methylated spirit* has advanced to 1s 8d. per gallon naked, coal-tar *Naphtha* (solvent) 90–95 per cent. is 1s. 2½d. to 1s. 3d., *Crude* 30 per cent. 10d. per gallon, *Benzol* is somewhat easier; 90 per cent. at 2s. 2d., 50 per cent. at 1s. 10½d. per gallon.

OILS (ESSENTIAL).—*Otto of rose* has been in pretty strong request lately, and the tendency is towards higher rates, although no official advance has yet been made in any of the leading brands. A little more business is said to have taken place lately in *American oil of peppermint* H.G.H. at the rather low price of 10s per lb., at which figure it is still possible to buy. *Eucalyptus* oil is in fair demand on the spot, but there is no change in the quotations. About 15 tons of *Citronella* oil in drums have been sold within the last few days at 1s. 10d. per lb. c.i.f. for January–March, 1s. 9d. c.i.f. for January–May, and 1s. 8½d. c.i.f. for January–September steamer-shipment to London. *Oil of lemon* is considerably firmer; quotations range from 3s. 6d. up to 5s. per lb., f.o.b., but it is expected that there will be a further increase in price shortly. *Sweet orange oil* is also exceedingly scarce and quoted at higher rates from 7s. to 7s. 9d. per lb. f.o.b. *Bergamot*, after having declined about 2s. per lb. lately, now shows a turn for the better, to day's quotations for fair quality being from 8s. 9d. to 9s. 6d. per lb., f.o.b. *Chinese* oils are practically unchanged. Last week's quotations still hold good for *Oil of cassia*. In *Star anise* oil no further business is reported since the sales at 10s. 1½d. which we have already referred to, but 10s. 3d. per lb. is now the general spot price. For arrival the quotations are out of proportion high. *Lemongrass* firm at 2½d. per oz. on the spot, or 2½d. from second-hand.

OIL (OLIVE).—The selling season is now at its height, but business remains very quiet and without special change. Best *Italian* eating oils, "sublime and cream," are quoted at from 47l. up to 50l. f.o.b. per ton of 252 gallons. *French* ditto at from 40l. to 50l., other descriptions unchanged. *Malaga* oil at 28l. c.i.f., *Seville* at 27s. c.i.f.

OPIUM.—The London market has been moderately active since last week, with a limited business in *Manufacturing*, at 7s. 6d. to 8s. per lb. There is little doing in *Druggists'* kinds, which are still quoted at 7s. 3d. to 7s. 6d. per lb. for seconds, and at 7s. 9d. to 8s. 6d. per lb. for fine quality, or in *Soft shipping*, for which the prices range from 11s to 13s. per lb. *Persian* opium unchanged, at from 11s. 3d. to 13s. per lb. There has been a brisk demand to-day for the United States, and a considerable quantity has changed hands—*Karahissar* at 8s. per lb.; other kinds at from 8s. 3d. to 8s. 6d. per lb. No business has been done in soft shipping.

OPIUM SALTS.—Quiet. The manufacturers' nominal quotations are, morphia in powder, 4s 3d.; morphia in crystals, 4s. 5d.; Codeia, 10s 6d. per oz. These figures can be shaded from second-hand holders.

PILOCARPINE.—The price of this alkaloid, which has long been exceedingly high, has suddenly undergone a great change. The two chief manufacturers, up to the beginning of this week quoted 8s 6d. per gramme for either the *Hydrochlorate* or *Nitrate* salt, but one of them suddenly, and without warning, reduced the figure to 5s. per gramme in both cases; the other one has now followed suit. This unexpected change is said to be due to the fact that the party who began the aggression has obtained the control of a quantity of jaborandi leaves from a new source, but it is hinted by his agent that it is very likely that after a short time the old price may again be restored. In the meantime, fine rich jaborandi leaves remain as scarce as ever in the open market.

PISTACHIO KERNELS have lately advanced, and for fine quality from 2s. 6d. to 2s. 9d. per lb., f.o.b., is now asked.

QUICKSILVER.—Slow of sale, at 7l. 7s. 6d. per bottle from the importers and 7l. 3s. 6d. in secondhand.

QUININE.—The market remains exceedingly quiet. *German* quinine in bulk is quoted, in secondhand, at 12½d. per oz., but bids of 13¼d. per cz. would probably lead to business.

QUASSIA-WOOD.—Steady, with sellers at 80s. per ton for logs.

SAFFRON.—A very steady market, but without any business of importance. The spot quotations range from 28s. 6d. per lb. for finest *Valencia* down to 25s. for ordinary quality.

SALEP has lately advanced considerably, in common with most other products from Asia Minor. The drug is practically obsolete in this country for pharmaceutical purposes.

SHELLAC opened very quietly this week, with sales of orange TN, January–March delivery, at 86s., and March–May at 84s. per cwt. At auction 600 cases unworked shellac were offered, and 200 sold at steady rates for second orange and an advance of about 5s. on button lac: fine pale second orange realising 101s. to 105s.; ordinary cakey to medium red, 83s. to 86s. per cwt.; good to superior first *Button*, 100s. to 112s.; blocky to dark ditto, 90s. to 98s.; and resinous dark seconds, 85s. to 87s. per cwt. *Garnet AC* has sold at 90s. per cwt.

SPERMACELE.—In fair demand. American refined offers at 1s. 7½d. per lb. on the spot.

SPICES (VARIOUS).—At auction 200 bags common dusty *East Indian coriander* seed sold as low as 3s. to 4s. 6d. per cwt. *Capsicums* are still tending easier, fine long bright picked sold at 46s. 6d. per cwt., common Japan at 13s. 6d. per cwt. *Cassia lignea* quiet. Fair sold at 31s. per cwt. *Chillies, mace, and nutmegs*, very dull. *Pimento* firmer, at 2½d. per lb. *Ginger* quiet for Cochin, of which a quantity sold without reserve:—Medium B cut, 55s.; ordinary small C cut, 45s. to 45s. 6d.; rough small to medium cut, 52s.; common shrivelled to medium brown, 26s. 6d. to 31s.; small rough washed new crop, 34s. 6d. to 35s. per cwt. *Jamaica ginger* lower: fair Rhatcon, 59s. to 60s.; common small mixed, 68s. per cwt. *Zanzibar cloves* quiet. Privately 2d. per lb. has been accepted on the spot. At auction 134 bales sold at from 1¾d. to 2½d. per lb. for common dull to fine bright. *White pepper*, after having been firmer, declined at auction, when 54 cases picked bright bold Singapore sold at 4¾d. to 5d. per lb., and 450 bags fair Penang at 2½d. per lb. *Black pepper* quiet.

SUGAR OF MILK.—Firmly held and not unlikely to advance further to some slight extent before the new crop is available. The prices vary greatly according to brand, from 72s. 6d. up to 85s. per cwt. being quoted by different holders.

STAVESACRE-SEED.—Scarce and steady; 9½s. per cwt. is the spot price.

TRAGACANTH.—Firmly held, but without much business; first pale *Persian* is quoted at 15l. per cwt.

TURMERIC.—Good *Madras* finger was sold privately a few days ago at 9s. 6d. per cwt.

WAX (JAPAN).—Sales of good squares are reported at 34s. per cwt., but 35s. per cwt. is asked on the spot. The quotation for February–March shipment is 37s. per cwt. c.i.f.

New York Cables.

We have received the following cablegram:—"New York, January 30. *Cascara sagrada* is extremely firm. Balsam copaiba of all varieties in active demand, to-day's quotations being as follows: Good *Angostura*, 33c.; bright *Para*, 34c.; Central American, 32c. per lb. Canada balsam is quoted at \$1.90 per gallon. Balsam Peru, \$2.20 per lb. Tolu balsam very quiet, at 50c. per lb. for good quality. Tonca beans steady, at \$2.50 per lb. for fine *Angostura*. Opium, considerably stronger in consequence of alarmist information from Asia Minor; \$2 per lb. is to-day's price for fair druggists'. There have been fresh arrivals of gum chicle, and the price consequently has dropped to 35c. per lb. Quinine is dull and dragging. German brands in bulk can be had to-day at 26c. per cz." The following cablegram from our New York correspondent, dated January 23 last, was received too late for insertion in our Winter number:—"Cascara sagrada has further advanced, closing very firm at 4½c. per lb. Sassafras-root is on the rise, as much as 7½c.

per lb. being now asked. On the other hand, refined spermaceti is weaker, and may be had at 36s. per lb. Opium is very unsettled, and rather easier, at \$1.95 per lb. for fair druggists'.

Heavy Chemicals.

The market for heavy chemicals has improved, and now shows a rather firmer tone than at the date of last writing. Home orders for prompt delivery are fairly abundant, whilst orders for export are considerably heavier than is usual at this time of the year. The latter fact is no doubt accounted for by the weather continuing so open. At the same time, all round requirements in most cases are not sufficient to prevent stocks accumulating to some degree. There are few changes of any great importance to report in prices; those which have taken place, however, are mostly in manufacturers' favour. Probably the most noticeable one is that in the position of *Cream of tartar* which, since the present year opened, has advanced from 93s. per cwt. for crystals, and 98s. per cwt. for powdered to 106s. to 107s. per cwt. for the former, and 108s. to 110s. per cwt. for the latter. A still further advance is looked upon as probable, owing to the increase in value of raw materials. *Bleaching-powder*, *Soda crystals*, and *Caustic soda* meet with fairly heavy inquiry, prices remaining steady. *Recovered sulphur* continues to be rather scarce, and quotations have risen to 3l. 17s. 6d. to 4l. per ton in 2 cwt. bags. *Alumina* products are all in moderate demand, with steady tone. *Sulphate of ammonia* is without improvement; for prompt at the different ports values are as follows:—Leith, 8l. 8s. 9d.; London, 8l. 10s.; Hull, 8l. 8s. 9d. to 8l. 10s.; Beckton terms, 8l. 7s. 6d. Exports from Leith last week amounted to 489 tons. *Aniline oil* and *Salt* are now respectively 8½d. and 7½d. per lb. *Crystal alum* is selling freely, especially the better qualities. *Green copperas*, both best Lancashire and Welsh makes continues in strong demand, and are rather scarce. *Sulphate of copper*, which was taking an easier turn, seems to have recovered its former position, and best brands are selling steadily at fairly good prices. *Baryta compounds* maintain their firm position, and have a still further upward tendency. Of the *Chloride* practically nothing is obtainable for prompt, and manufacturers' are well sold ahead. The higher percentages of the mineral *Carbonate*, or *Witherite*, are also scarce, and a better demand for the hydrate is also to be noted. *Chlorate of potash* has advanced, for spot and forward, to 4¾d. per lb. *Chlorate of soda* remains unchanged, but meets with considerable more inquiry. *Lead salts*, especially the *Acetate*, are rather flat, prices tending downwards. *Hypsulphate of soda*: Prices are fully and easily maintained. A good demand for both home consumption and export exists, the latter being quite up to the average. *Silicate of Soda* in more active demand for export, home requirements only poor. *Sulphocyanides* have more inquiry but at unchanged values,

The Liverpool Drug market.

Our Liverpool correspondent, writing on January 29, says that in *Acacia gums*, Sudan sorts show no recovery in price, a small business continuing to be done within the range of values, say 47s. to 60s. per cwt. Brazilian gum is steady with a small stock offering at 22s. 6d. per cwt. Niger quiet, buyers waiting the landing of late arrivals. *Castor oil* is a shade easier at 27½d. for good seconds Calcutta, 27½d. for first pressure French, and 2½d. per lb. for Madras. Part of the recent arrival of Newfoundland *Cod liver oil* has been sold at 5s. per gallon. There is more demand for *Kola nuts* for export, and prices range from 7d. to 9d. per lb. for scund nuts. *African ginger* is easier, and holders might shade late prices for quantity. *Guinea grains* are selling at 16s. 6d. to 18s. for prime bright *Beeswax* has been arriving, but holders show no disposition to give way. *Spermaceti*: Thirty-nine cases have sold ex quay at 1s. 6d., and now holders talk of better prices. *Saborandi leaves* at auction attracted no attention.

The Smyrna Opium-market.

Our mail news from Smyrna brings us up to January 13. On that day the price in Smyrna of fair manufacturing opium was 7s. 7d. per lb. "We think," however, writes our correspondent, "that the price would have been several pence lower but for the fact that traders here believe that

the U.S. will this year place a new duty of \$2 per lb. on opium, and that both Smyrna and Constantinople houses have large orders on hand from American speculators to buy and ship at a moment's notice, so as the opium should be imported before the duty is enforced." The total sales between January 7 and 18 only amounted to about 20 cases.

Price-list.

THE following are some current wholesale market quotations of fine and miscellaneous chemicals and other preparations not specially enumerated in other parts of our Trade-report. All prices are for large wholesale parcels, delivered in London.

Articles	Price	
	January 30, 1896	
Acetanilid	per lb.	s. d. to s. d.
Acid, acetic, 98-100 per cent. glacial	per cwt.	40 9 " 42 3
" " 35 per cent. (B.P.)	"	16 0 " 16 3
" " 30 per cent.	"	14 9 " 15 3
" boracic, ref. powder	"	31 6 " 32 0
" " crystals	"	29 6 " 30 0
" benzoic, crystals, ex. toluol	per lb.	2 2 " 2 3
" " ex. resina (B.P.)	"	4 3 " 4 6
Acid, chromic, crystals, B.P.	"	1 3 " 1 4½
" " commercial	per cwt.	77 6 " 78 0
" gallic	per lb.	1 9 " 2 2
" hydrocyanic, B.P., 2 per cent.	"	1 8 " 1 9
" " (Scheele), 5 per cent.	"	2 6 " 2 7
" nitric, 1.360 s.g.	"	0 2½ " 0 3
" " 1.420 "	"	0 2½ " 0 3
" " 1.500 " pure	"	0 9 " 0 10
" oxalic	"	0 3½ " 0 3¾
" picric (crystals)	"	1 0 " 1 4
" pyrogallic, resublimed	"	8 0 " 8 12
" salicylic, powder	"	2 3 " 2 4
" " crystals	"	2 7 " 2 8
" " phys. pure	"	4 6 " 4 7
" sulphuric, B.P.	"	0 3 " 0 3½
" tannic, B.P.	"	1 8 " 1 9
Aloin	"	2 4 " 2 10
Alum (chrome)	per cwt.	13 6 " 17 6
" " ust., crystals	"	38 0 " 39 0
" " powder	"	42 0 " 43 0
Ammonia liquid, 28°=23°	per lb.	0 4 " 0 5
Antim. crocus, crystals	per cwt.	31 0 " 32 0
" " powder	"	34 0 " 35 0
" black sulph., crystals	"	19 0 " 20 0
" " powder	"	22 0 " 23 0
Antimony regulus (metal)	per lb.	0 5 " 0 6
Antipyrine	per oz.	2 9 " 2 9½
Atropine, pure	"	10 6 " 11 0
" sulphate	"	8 0 " 8 6
Bismuth, carbonate	per lb.	4 0½ " 4 1½
" metal	"	3 0 " 3 1
" nitrate, crystals	"	2 3½ " 2 4½
" oxide, B.P.	"	5 9 " 6 0
" subnitrate, B.P.	"	3 8 " 3 9
Caffeine, pure	"	18 0 " 19 0
" citrate, B.P.	"	14 9 " 15 0
Camphor, refined, bells	"	2 1½ " 2 2
" " tablets	"	2 2 " 2 5½
Caramel	per cwt.	20 0 " 25 0
Carmin	per lb.	15 6 " 16 0
Chalk, French, powdered	per cwt.	5 6 " 5 7
" " cut in slices	"	30 0 " 31 0
Chloral hydrate, crystals	per lb.	4 0 " 4 7½
" Liebreich	"	4 9 " 5 4½
Cobalt, chloride	"	2 10 " 2 11
" nitrate, crystals	"	3 4 " 3 5
" black oxide	"	6 2 " 6 3
Cocaine	per oz.	14 6 " 17 3
Cotinine, B.P.	"	10 6 " 10 9
Colloidon, meth.	per lb.	1 4 " 1 5
" B.P.	"	4 9 " 5 0
Cumarin	per oz.	2 10 " 3 0
Emetine, light (alkaloid)	"	46 0 " 48 0
Ergotin, B.P.	per lb.	7 0 " 7 1
" Bonjean	"	6 6 " 6 7
Ether, rectified, 0.750	"	4 8 " 4 9
" " 0.735, B.P.	"	4 9 " 5 0
" pure, 0.720, B.P.	"	5 4 " 5 5
" " (from meth. sp.)	"	2 0 " 2 1
" butyric, absolute	"	5 5 " 5 6
" metoylated, 0.730	"	0 7½ " 0 7¾
" " 0.717 (abs. anesth.)	"	1 3½ " 1 4
Eucalymin, B.P.	"	20 0 " 21 0
" green or brown	"	24 0 " 26 0
Gold (chloride), in 15-gr. tubes	per doz.	18 3 " 19 0
Heliotropin	per oz.	2 3 " 2 4
Hydroquinone	per lb.	6 6 " 6 10
Iodoform, B.P.	"	15 6 " 15 9
Iron, sulphate	per cwt.	16 0 " 16 1
" reduced, by hydr., pure	per lb.	1 1½ " 1 2½
" " " black	"	0 11½ " 0 12

Articles	Price	
	January 30, 1896	
Jalap, resin, B.P.	12 0	14 0
Lithia carbonate	6 6	7 0
" citrate	4 9	5 0
Magnesium, ribbon and wire	18 0	18 6
" powder, bars, or shavings	13 6	14 0
Morphia, hydrochlor. per oz.	4 3	4 5
Naphthalin, white per cwt.	17 0	18 0
Nickel, metal cubes, 99-100 per cent. per lb.	1 7	1 8
" sulphate	0 6 1/2	8
" ammonio	0 5 1/2	7
Peroxide of hydrogen, 10 vols. per gall.	1 9	
Phenacetin per lb.	5 3	14 3
Podophyllin	7 6	7 9
Potassium oxalate, neutral crystals	0 4 1/2	0 5
" bi-oxalate (sal acetos) crystals	0 4 1/2	0 5
" bromide	0 5	0 5 1/2
" iodide	1 8	1 9
" prussiate, yellow	11 6	12 0
" cyanide, 98-100 per cent.	0 2 1/2	0 3 1/2
" 30 per cent.	1 4 1/2	1 6
" permanganate per cwt.	0 8 1/2	0 11
" prussiate, red crystals per lb.	67 6	75 0
Saccharin, 500 strength	1 4	
" 500	34 0	40 0
Salicin	57 0	60 0
Salol	8 3	
Sal prunella, balls per cwt.	7 4	8 3
" cakes	39 0	42 6
Santonin per lb.	29 0	32 6
Silver, metal per oz.	7 3	7 6
" nitrate, crystals	2 6 1/2	
" sticks	1 8 1/2	1 9
Sodium, sulphite per cwt.	1 9 1/2	1 9 1/2
" salicylate, powder per lb.	20 0	
" crystals	2 5	2 9
Scammonium, virgin	3 0	3 4
Scammony, resin	31 0	33 0
Sodium acetate, white crystals per cwt.	8 9	9 0
" pure	20 0	21 0
Strychnine, precip. per oz.	32 6	35 0
" crystals	1 9 1/2	1 11 1/2
Sugar of milk, crystals or powder per cwt.	1 9 1/2	1 10
Sulphonal per lb.	75 0	90 0
Terebene, pure	17 6	18 6
Terpene, hydrate	1 0	1 2
Terpineol per oz.	1 7	1 10
Thymol, crystals per lb.	6 6	
Turpentine, Chian	7 6	8
" Venice	5 8	10 0
Vanillin per cwt.	70 0	
Veratrine, B.P. per lb.	16 0	
Vermilion, English	4 3	4 6
" Chinese	2 4	
Urethane (ethyl)	2 4 1/2	2 6
	13 0	14 9

* With graduated scale of discounts, according to quantity.

LAST WEEK'S DRUG-SALES.

As explained in our last issue, the publication of our Winter number prevented us from publishing the result of last Thursday's drug-auctions in the body of our journal. It was printed on the orange "Supplement," and we repeat below the principal features of that report:—

THE drug-auctions occupied less time than any within memory of the proverbial "oldest inhabitant" of the sale-room. They commenced punctually at 10.30, and the hammer fell on the last lot at 1.32. In that space of time twelve catalogues, aggregating 874 lots, were disposed of; and but for the inclusion in the sales of about 130 lots of vanilla, and of a few lots of "illegitimate" goods—such as gum tragacanth, which ought not to be offered at the drug-auctions at all—another half-hour would have been gained. This promptness was in large measure due to the fact that several brokers had complied with the general wish of the wholesale trade, informally expressed at the recent trade meeting on the subject of monthly sales, by doubling or trebling the size of the lots. This was especially the case with rhubarb, which was partly offered to-day in lots of 5 or 6 cases; benzoin (now shown in lots averaging 4 or 5 cases), myrrh, dragon's blood, ergot of rye, &c. There was one lot of 23 bales of Tinevely senna, which, however, remained unsold. The innovation was decidedly encouraging, for the prices paid were quite as good as those formerly realised, and the proportion of goods sold certainly not less than usual.

ALOES.—The only variety offered to-day was *Curaçao*, of which 464 packages were shown; only 26 of these, however, sold, rather dark brown livery at 35s., ordinary damaged at 9s. 6d. per cwt. Fine Socotrine aloes still remains scarce.

ARECA-NUTS.—About 6d. easier; 4 bags sold at 11s. 6d.

BALSAM TOLU is lower. Two cases of fair quality sold, without reserve, at 1s. 10d. per lb.; common at 3d. per lb.

BENZOIN.—*Sumatra* gum sold fairly well at to-day's auctions, although the prices were a little easier.

CAMPHOR (CRUDE)—In the private market the weakness continues, *Formosa* being offered for distant shipment at 160s., c.i.f. None seems available near at hand.

CANTHARIDES.—At to-day's auctions 12 cases fair *Chinese* flies were offered. One shilling per pound would be accepted for them, and a bid of 11d. per lb. was refused. Good *Russian* cantharides may be had on the spot at 2s. 4d. per lb.

CARDAMOMS.—In good demand, at very firm but occasionally slightly dearer prices. At to-day's auctions 124 packages were offered, of which 38 sold readily.

CASCARA SAGRADA—Offers privately at 22s. per cwt. on the spot, although 21s. might be accepted. The quotations for ordinary from New York are 20s. 6d. per cwt. c.i.f. for new, and from 21s. 6d. to 22s. c.i.f. for two-year-old bark.

CASCARILLA is slightly firmer; 28 bales of good, partly silvery, small quill were placed in sale to-day and readily disposed of at from 4s. for good down to 35s. for fair quality.

DRAGON'S-BLOOD—In fair demand at full prices. Nine cases were sold at 9l. 10s. for good bright Singapore lump.

ELEMI.—Quite neglected, and obtainable at low rates. A 25-case parcel of *Manila* was bought in at 30s. per cwt.

ERGOT OF RYE.—Well represented at the auctions, and selling at steady rates with a good demand. Of 54 bags 38 found buyers—good *Spanish* at 9d., ordinary, slightly wormy, ditto at 7 1/2 d., and wormy *German* at 5 1/2 d. to 5 3/4 d. per lb.

GENTIAN.—Good *French* root is now held for 22s. 6d. per cwt. privately, but that price has not yet been paid.

GUARANA very much lower; the last price paid privately was 3s. per lb., but to-day 2s. was accepted for one case.

HONEY unaltered, with small sales of fair *Jamaican* at from 20s. to 24s. per cwt. For *Queensland* honey a bid of 21s. was rejected.

IPÊCACUANHA.—*Brazilian (Rio)* root is firmly held, and of 63 bales offered at auction, only 10 sold at an advance of about 2d. per lb., from 5s. 1d. to 5s. 3d. being paid for fair sound annulated, and 5s. to 5s. 1d. for slightly damaged.

KOLA.—Unchanged. One box of ordinary quality sold at 5d. per lb.; good West Indian bought in at 1s. per lb.

LIME-JUICE.—Seven barrels from Antigua sold at 1s. per gallon. Another parcel, although advertised, was not landed in time for the sales.

MENTHOL.—Fair quality could probably be had at 13s. 6d. per lb. on the spot, but for 4 cases of Cocking's brand offered at sale 16s. per lb. is said to be the lowest acceptable price.

MUSK.—Only a few tins were offered to-day, and scarcely anything was sold. Fine first-pile Tonquin pods were bought in at 85s. per oz.; for one tin of thin-skin, but partly spurious third-pile pods 41s. per oz. was accepted.

MUSK SEED.—To everyone's astonishment 1s. 6d. per lb. was asked for a small parcel of good *East Indian* to-day.

NUX VOMICA.—A trifle easier. Eighty bags fair bright small *Cochin* seed sold, without reserve, at 6s. per cwt.

ORRIS.—One cask of pale Italian cuttings sold cheaply to-day at 50s. per cwt.

PHENACETIN.—Sales of small lots of ordinary brands have been made at 5s. 3d. per lb., but in quantity it is still possible to buy below that figure, perhaps even as low as 5s. The first-hand price for *Bayer's* brand remains unchanged, but in second-hand there are sellers, we believe, as low as 8s. 6d. per lb. There is a good deal in second-hand.

RHUBARB.—A fair demand prevails, especially for *Canton*, of which some good parcels were offered, and which realised a slight advance in price. Altogether 189 cases were shown, and 68 sold at the sales, while after the auctions a fair quantity of the *Canton* root was sold privately at from 1s. 4d. per lb. for good bright bold and flat downwards.

STROPHANTHUS.—Two bags fair *Kombé* were bought in at 3s. 10d. per lb.

TONCA BEANS.—Unchanged. At auction good frosted *Pará* were bought in at 2s. 6d.; ordinary foxy at 10d. per lb.

VERMILION.—Good *Chinese* brands, in small wholesale quantities, are now held for 2s. 6d. per lb.



Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.

Anti-cutting Schemes.

SIR,—I agree with Messrs. Maw, Son & Thompson in much they say about anti-cutting schemes. It seems to me that any scheme that is not universally applicable, and is intricate in working, must fail. We must look narrowly at these schemes and see in whose interest they are started. A firm start something of the sort and are going to stop directly anybody who undersells. But you never find the underseller has the smallest difficulty about his supply, and nobody ever interferes with him. At the inauguration of the schemes the maker raised his price 1s. or 1s. 6d. per doz., and, I should be inclined to think, was the greatest benefactor by it.

Or, as in Messrs. Stern's case, you have to order large quantities of goods. In their case you must have 2 doz. If the trade had universally taken the tempting offer, and every chemist in the United Kingdom had ordered 2 doz. pepsalia each, who would have benefited? Not the retailer.

The fact is, this discount-for-quantity system is the greatest possible evil, and is the direct cause of successful cutting. A traveller showed me some food-warmers a week ago at 16s per doz., 14s. if you take a full dozen. I consider it most unfair. It enables the man with three or four shops to get a dozen—three for each place—and sell at what the smaller neighbour pays, and still make a profit.

I quite agree with Messrs. Maw that the retail price of things should always be fairly in proportion to their cost, and they should not encourage a system that makes the adjustment of a regular scale impossible.

I am, Sir, yours obediently,

91 Hampstead Road, January 28. WM. G. TAPLIN.

SIR,—I was astonished to read the letter of Messrs. Maw, Son & Thompson in your issue of January 25. Do I rightly understand that whilst they refuse to co-operate with manufacturers in preventing extreme cutting among the retail trade they would "gladly co-operate" with other wholesale houses to secure larger profits for themselves? If such agreements are right in the wholesale trade surely they are not wrong when made in the interest and for the protection of the retail dealer. It is quite as essential that "fair remunerative profits" be made by the one section of the trade as the other, and it necessarily follows that when the retailer is protected the wholesaler is too, and this ought to compensate for the extra "amount of trouble and detail consequent on these schemes" on which Messrs. Maw, Son & Thompson lay so much stress.

Such firms as Messrs. Blondeau & Co. and Messrs. Elliman's deserve the practical sympathy of all chemists. The weakness of the anti cutting schemes now in practice lies, I think, in their isolation. If the two firms just mentioned would co-operate in carrying out the scheme and allow other firms to join them who might from time to time wish to do so, success would be assured and the remedy for extreme cutting found. The advantages of such a course are obvious: one signed agreement would suffice for an unlimited number of manufacturers who might form such an association, and little more clerical labour would be required than is now necessary for the needs of one manufacturer; besides this it would simplify and decrease the trouble to the wholesale houses and the retailer. Even large buyers could not successfully oppose such a combination.

Yours faithfully,

CONSISTENCY. (258/70).

SIR,—We read with pleasure all suggestions *re* cutting. We do not see how Messrs. Maw, Son & Thompson's plan for the wholesale dealers to charge a higher price for patents would benefit the chemists, as stores buy patents in as large quantities as the London wholesale houses, consequently they would be able to carry on the cutting just the same, unless makers made them sign an agreement not to do so. The main thing is to get patent medicines back to their former or advertised price: this would stop the stores putting their flaring advertisements in the papers, "1s. 1½d. Beecham's pills, 9½d. per box." It is this difference in price that draws the public to the stores, who naturally think everything else is sold in the same ratio. Our plan is for such makers as Beecham, Cockle, &c., to raise their wholesale prices to 11s 6d. per doz. (without any warning to the trade, so that no speculation could occur); then the wholesale dealers could charge the retailers 12s. per doz. The profit would be no better than it is now, but would the stores do half the business they now do?

Yours faithfully,

M. & Co. (260/3.)

SIR,—There is to be a council meeting of the Proprietary Articles Trade Association soon, to arrange a *modus operandi*. It is almost certain that a rule will then be made to throttle substitution in handling Association articles. With that proposal I have no fault to find, seeing that I was the framer of it (in a circular issued five or six years ago), but there is a danger in connection with it at the present juncture. In the agreement in my circular about 25 per cent. profit was the limit below which there was to be no anti-substitution clause, and it was on that understanding that the hundreds of retailers consulted agreed to endure the restriction. What I fear is that those in the Association who only guarantee say 10, 15, or 20 per cent. profit will also want to share the benefit of the anti-substitution clause, a proposition which cannot be too strongly condemned. May I appeal to those of your readers who sympathise with the anti-cutting movement and who have not yet joined the Association to do so. The retail section of the council is not yet elected, and those who join at once will have a voice in the election. I hope only those who will uphold the 25-per-cent. minimum will be elected. Readers who take this advice might intimate their wishes to the secretary (Mr. Glyn Jones, 2 and 3 Stone-cutter Street, London, E.C.), when forwarding their subscriptions. The Association is not strong yet in the retail element, and I hope that the amount payable (5s. for retail members) will not be considered a bar to lending a helping hand at this critical time.

WILLIAM JOHNSTON.

Brixton, S.W., January 29.

Chemists' Mutual Insurance.

SIR,—We have read with pleasure your article of January 11, and Mr. Harrington's letter of January 18. We are afraid Mr. Harrington has not been reading the *C. & D.* carefully or he would have seen an advertisement from The Scottish Employers' Liability and Accident Assurance (Limited) offering to assure such risks. We wrote to the company at that time, and continue to insure with them. The special clause covering chemists' risks reads as follows:—"That this policy covers assured's liability to the general public in consequence of errors in making up medicines, or any act, or omission, on the part of assured, or assistants, including all law costs and the expense of meeting wrongful claims."

They charge 10s. as premium for each assistant per 100%. We think this premium far too high, as in our case we have to insure six assistants (which term means apprentices or porters) at 3l. per annum. If the full number are not included, it would result in case of accident (company's liability being proportionably less) in considerable loss to insurer. There seems to be a good field for a mutual assurance company—and if only half the chemists in this country were to join it, principals at 5s. each and assistants at 1s. each per annum, the result would yield a very large annual revenue—a limited liability company, with a capital of 5000l. in 1l. shares, floated on the condition of yielding only 5 per cent. to shareholders, 5 per cent. to a reserve fund, and the balance to the Benevolent Fund of the Pharmaceutical Society as a

thank-offering for a successful year's business without accident.

INSURED. (253/77.)

Calomel Powders.

SIR.—With reference to your recent statement that corrosive sublimate had been found in old samples of calomel-and-sugar powders, I have endeavoured to confirm the assertion with the following results.

For my material I was, fortunately, in possession of a disused veritable old sample of cal. c. sacch. 1 in 5, which had been exposed to air and moisture for quite two years, and although I operated on a quantity equivalent to 1 dr. of calomel, I have not been able to find so much as a trace of corrosive sublimate.

My method was as follows: 5 dr. of the old sample, having been carefully dried and powdered, was shaken up with warm ether and allowed to stand for two hours. It was then placed in a tube constricted at the end in the form of a percolator, and thoroughly exhausted with ether. The percolate was next evaporated, at a gentle heat, to dryness, the residue (which was almost invisible) dissolved in boiling distilled water, and H_2S passed through, with the result that no change of colour was perceived—proving conclusively, I think, that given a pure sample of calomel at the commencement, there is no need to fear a change taking place in calomel c. sacch., as has recently been stated to be the case.

I am, yours truly,

313 Sydenham Road, S.E., A. W. NUNN, PH C.
January 24.

Liq. Plumbi Subacet. Dil.

SIR.—In reading over Royle's "Materia Medica," page 250, I find the following note under "Liq. plumbi subacet. dil." :—

"The small quantity of carbonic acid contained in distilled water is sufficient to render the solution a little milky. Hence it is necessary to filter it, and, to prevent further absorption of the gas, to preserve it in well-closed bottles. Common water renders the solution very turbid from the deposition of insoluble carb. sulph. and chlorid. of lead. The small quantity of spirit serves no purpose and has no significance."

I remember once reading that the action of the spirit was to drive the CO_2 out of the water, thereby avoiding any precipitation of the lead. For proof I made three samples of the B.P. dilute liquor—(a) by mixing the lead and spirit as is usually done and adding to the water; (b) by adding the lead and then the spirit to the water; (c) by first shaking well the spirit and water, leaving the bottle uncorked for a few minutes, and then adding the lead: a and b gave me quite milky results, with, after a time, a heavy deposit on the bottle; c gave a trace of cloudiness but no deposit after forty-eight hours without filtration. From these results I would conclude that Royle only viewed the spirit from a therapeutic point of view, which is very largely held by the majority of pharmacists, but that, pharmaceutically viewed, the spirit is a most important addition to the solution; and I would suggest that the B.P. should contain directions as to how it should be properly prepared.

Yours sincerely,

Belfast, January 24. ALFRED ADAMS, L.P.S.I.

The Minor.

SIR.—The majority of Minor men can endorse what "A.P.S." says. I have always maintained that those men who are fortunate enough to qualify at their first attempt do not realise the uncertainty of the examination. Stimulated by success, they go on for the higher qualification and comprise the greater portion of Major candidates. Rejected Minors, discouraged by failure, look well before they leap into the fire again. The leading lights of the Pharmaceutical Society bewail the scarcity of Major men. Let them give a fairer Minor, and they will have no cause for complaint.

As regards the fairness of the examiners, I could relate a few truthful anecdotes which might upset some of the unsolicited testimonials accorded to them, but I will content myself with saying that I have found that the professors are

an improvement on the rank-and-file—not that they give easier questions, but there is that absence of self-importance and sarcasm which a candidate is apt to be treated to gratis, and which he finds not conducive to the reduction of his feverish symptoms. That an examiner is allowed the opportunity to prejudice another examiner against a candidate (a practice which I have witnessed) is, I consider, most unjust. The above facts, combined with others, make it very desirable that a written examination should take the place of the present system.

Yours truly,

ANOTHER RECENT A.P.S. (260/10)

DISPENSING NOTES.

258/48. A. G. Keith.—The citric acid in syr. limonis will decompose some of the sodium salicylate, and as the syrup varies in acidity, so will the precipitate.

254/40. H. D. K. has had a prescription ordering pil. hydrarg. sub chlor. and pil. aloes Barb. of each gr. iiss.: what should be dispensed for the former?

253/59. Raja.—We can never be sure about copies of prescriptions: eyes differ so much in detecting slight strokes; but sod. phosph. $\frac{3}{4}$ iss. is our rendering of the first line in yours.

255/29. Seaside.—You cannot send out an aqueous mixture of potass. iodid. and quin. sulph. "perfectly clear" without inducing chemical decomposition, and subsequent filtration. See "The Art of Dispensing."

259/22 Subscriber.—The salol, bismuth, and chlorodyne mixture was originated by Dr. A. M. Anderson, of Dundee, as a cure for typhoid, but his prescription gives Symes's lac. bismuthi, and with this it makes an excellent mixture (see C. & D., April 21, 1894, page 535). If Schacht's liquor is ordered, as much mucil. tragac. should be used along with it so as to suspend the salol.

250/31. Argus.—Probably the previous dispenser in ignorance filtered the solution.

LEGAL QUERIES.

255/44. W. R. H.—When the registrar refuses to accept a trade-mark, you can if you like claim a hearing, and in some cases on the borderland it is found possible to induce him to change his mind. But we should not think you would be able to persuade him to vary his decision in your case.

255/25. Rhei.—We do not think a label "Paregoric mixture superior to B.P. formula," or any other label the object of which would be to mislead the customer, would be perfectly safe to use.

36/35. Legality.—An inspector of weights and measures is bound to be provided with the necessary standards when he attends at any place by the local authority's appointment to verify weights and measures. But his neglect does not justify you in using unstamped weights or measures. You had better communicate with the clerk of your County Council. The model regulations of the Board of Trade (which have probably been adopted by your local authority) require that the manufacturer's name and the maximum load shall be marked on every new weighing instrument—that is, a machine newly-stamped since 1889. We have not heard of this requirement being enforced in the case of dispensing-scales, but we presume it might be. The stamping in any district is valid throughout the United Kingdom by sec. 45 of the 1878 Act, though many inspectors do not seem to be aware of this.

258/6. *Pax.*—We presume your lease stipulates that you shall give six months' notice of your wish to determine the tenancy at any of the intermediate periods. It is not usual to require notice to be given on the complete expiry of the lease, and unless some unusual words appear to that effect it is not necessary to give such notice.

259/6. *A. O.*—It is illegal under the Medical Act, 1858, sec. 40, for any person not duly qualified to describe himself as an apothecary. A chemist and druggist as such is not duly qualified to use this description.

257/16. *Certus* asks if $\frac{1}{50}$ gr. of antim. tart. be added to seidlitz-powders, would this be allowable, and would it have to be signed "Poison"? [According to the reported cases it would be illegal to sell such powders as "seidlitz-powders" without some explanation of the addition, either verbal or printed. Emetic tartar is a poison in the first part of the poisons schedule, and we have no authority to indicate how little of it may be sold without fulfilling the statutory requirements.]

259/68. *A. N.*—We think the exemption in section 17 of the Pharmacy Act (1868) and in section 3 of the Amendment Act (1869) is sufficient to justify the sale of such a preparation as Easton's syrup, or any proprietary medicine of your own, if the label bears your name and address, and you enter the name of the person to whom you sell it in the prescription-book, there stating the ingredients of the mixture. But it is an essential, we think, that you should have compounded the preparation, and should know the ingredients. Therefore, we do not see how you could apply the clause to the sale of Fellows's syrup, &c.

259/49. In reference to a reply to "Staffordshire" last week to the effect that the transferee of a business must take out a new medicine-licence, Mr. McKellar, Glasgow, states that when he took over his present business the I.R. authorities allowed the medicine and the methylated spirit licences to be transferred to him on the written request of the original licensee.

254/69. *Ne Plus Ultra*—To make and sell wholesale an English liqueur you will require a compounder's licence (10l. 10s.) and a dealer's licence (3l. 3s.). The Board of Inland Revenue will permit spirit dealers to mix certain flavourings with spirit without requiring them to take out a compounder's licence. If you apply to your Excise officer, stating what you wish to make, he will probably be able to get you the necessary permission if it is only a single article.

MISCELLANEOUS INQUIRIES.

Back numbers containing formulae, educational or other specific information can be obtained from the Publisher.

N.B.—All queries should be accompanied by the business card of a subscriber, or the address label from THE CHEMIST AND DRUGGIST wrapper. We destroy anonymous letters. We do not answer queries of the kind here dealt with by post. We ask that separate queries shall be written on separate sheets of paper.

241/33. *H. C. N.*—Business in New Zealand just now is, if anything, better than in the Australian colonies, but we cannot say that there are better chances for chemists' assistants there than in this country. That is, those without capital, for the colonies afford much better opportunities to those with capital than can be got at home, because money is more valuable out there, and, if backed up by smart business energy, the chances of success are better than at home.

241/45. *J. W. H.*—The Sanitas Company are the makers of the sanitary sawdust which you mention.

241/53. *Gas.*—Acetylene Gas is not produced commercially, but calcium carbide is, and on immersing the carbide in water the gas is given off. You will find an experimental apparatus described in the *C. & D.*, August 24, 1895, page 312. Messrs. Read, Holliday & Co., of Huddersfield, supply cylinders of the carbide, which practically are equivalent to cylinders of the gas. You can obtain particulars from them on application.

242/44. *Newcastle*—Newspaper-prescribing is unquestionably dangerous, and this applies as much to the prescriptions given in the paper you mention as to any other, although they are written by a medical practitioner. When such prescriptions come to be dispensed chemists must use their judgment as to whether that should be done or not. In the case which "Newcastle" brings under our notice a prescription for an adult was handed to him, and he discovered that his customer wanted one for a child of $3\frac{1}{2}$ years. The danger is obvious.

244/11. *Laboratory* asks:—(1) "A better, cleaner and less troublesome method of preparing Adeps Benzoatus. There is a method (he believes) by using a tincture of the benzoin which gives the B.P. article more expeditiously." [Lard produced as suggested is dark and is not nearly so nice otherwise as the B.P. article. But a passable and elegant preparation is made by melting 1 lb. of lard in a water-bath, continuing the heat for ten minutes, then adding $\frac{1}{2}$ drachm of benzoic acid.] (2) For the best method of preserving fresh infusions, see the notes on infusions in the December number.

244/30. *Malto* sends a postcard with the following thereon:—"A few practical hints on the best way to treat last season's Sponges and Loofahs so as to make them clean and fresh-looking would be useful. What should they be washed in—cold or warm water; with or without soap or soda? How dried—by fire heat, or simply exposed to the air, &c.? [First, in regard to loofahs. Half fill a good-sized tub (say of 10 to 20 gallons capacity) with water with the chill off. Mix with it $\frac{1}{2}$ oz. of strong solution of ammonia, and steep the loofahs in the mixture. Knead them occasionally, and after half an hour pour off the water. Put the tub under the water-tap and let the water run over for a few minutes. Squeeze out a loofah, and if it is not clean enough repeat the ammonia treatment. Last year's sponges should be shaken free from sand, then washed well in the ammonia-bath (1 oz. to 20 gallons) and with cold water. After this to 10 gallons of water add 5 oz. of common hydrochloric acid and $\frac{1}{4}$ oz. permanganate of potash (the latter dissolved in $\frac{1}{2}$ pint of boiling water). Put the sponges into this bath and keep moving for a few seconds, taking care that none of the sponges becomes brown owing to deposit of manganic oxide, which can be prevented by keeping the bath freely acid. A few seconds suffice to bleach the surface, and the bleaching should not be carried too far. Remove the sponges into a bath of clean water, rinse thoroughly, and squeeze. To give them the equal yellowish tint immerse in a bath of liq. potassæ $\mathfrak{z}\text{iv}$. and glycerine $\mathfrak{z}\text{ij}$. in 2 gallons of water; again press. Soap should on no account be used. As to drying, that is best done by a current of warm air, and an ingenious chemist should have little difficulty in rigging up something to do that. For example, take a packing-case (such as a full-size tea-chest) and fit it inside with two or three floors of wire netting, the first one a foot from the bottom of the case, or stretch wires from end to end of the box. In one of the sides of the case, close to the bottom, insert a tin cylinder, such as a plaster tin, the open end inside and the closed outside, but with numerous holes bored in it; and in the lid of the box insert two similar tins as chimneys. The bottom cylinder is to be the channel for hot air, the current being produced by putting a spirit-lamp or Bunsen flame near the end. On the lowest shelf, immediately over the end of the tin cylinder, put a tin showcard or something of that nature to spread the warm air. Before putting the sponges in let the current go through the box for a few minutes, and after the loofahs and sponges have stood over night to air dry, spread them on the wire netting, turning now and then to ensure equal drying. With a well fitting lid and two chimneys placed on top at

the opposite end to the heating-tube there should be no difficulty in establishing a good current.]

245/32. *R. W. M.*—Soluble Essence of Lemon.—Make a tincture of 4 oz. fresh lemon-peel and 1 oz. of Tangerine orange-peel (freed from the interior white portion) with 1 pint of proof spirit. To the filtered tincture add $\frac{1}{2}$ drachm of citral or of terpeness oil of lemon.

245/61. *Little Pills*.—Clear and Inseparable Brilliantine.—Dissolve 1 oz. of castor oil in 4 oz. of rectified spirit, colour with a few drops of tr. rhei co., and perfume with otto of rose 8 drops, oil of neroli 2 drops, and oil of sandalwood 2 drops. You may use any other perfume you choose, or omit the colouring. Tr. croci gives a nice tint.

246/12. *W. H.*—See our issue of October 12, 1895, page 573.

248/51. *Nutrient*.—Meat juice Suppositories.—The best preservative for these is salicylic acid, in the proportion of 10 gr. to the ounce of mass. Use a hard gelatine basis—e.g., gelatine 1, water 2, glycerine 2 (all by weight). Soak the gelatine in the water until soft, add the glycerine, and heat until the weight is reduced to 4 oz.; then add the salicylic acid. As soon as the mass cools to 160° F. stir in 2 parts of beef-juice, heating gently if necessary, but taking care not to coagulate the juice. Then pour into the moulds.

247/11. *Ebona* complains that when powdered curd-soap is used as a Shaving powder it makes the skin smart. Powdered white Castile soap would not have that effect, but it does not lather quite so well. Perhaps the following addition to the curd-soap may obviate the smarting:—Dissolve 5 gr. of menthol and 20 gr. of lanoline in 2 dr. of ether; mix with $\frac{1}{2}$ lb. of the powdered soap; dry, and sift.

INFORMATION SUPPLIED.

For this section we are always glad to receive from subscribers brief notes on practical subjects, recipes which have been found good in practice or which have required modification, and hints or fresh ideas on any pharmaceutical or trade matter.

Healy's Ointment for Eczema.—By this is evidently meant Ihle's Paste, often prescribed by some medical specialists in combination with various drugs.

Amyli	3ij.
Zinc. oxid.	3ij.
Lanolin.	3j.
Vaselin.	3iij.

M.

C. C. (257/72.)

Draught to Prevent Nightmare (page 122).—For tr. capsici 3ss read 5ss.

Dark-rooms.—The following names may be added to the list we gave on page 15:—

Bournemouth.—Mr. T. M. Holmes.
Boyle.—Dinning's Medical Hall.
Burgess Hill.—N. G. Beck, The Victoria Pharmacy, Church Road.

Chichester.—Mr. F. Griffith, 11 South Street.
Dorking.—Mr. D. B. Coldwell.
Ealing.—Messrs. Barry, Phillips & Co.
Hastings.—Mr. J. Griffiths Richards, 58A High Street.
Keswick.—Mr. Townby.
Launceston.—Mr. W. Wise.
Manchester.—Mr. W. Maskew, The Longsight Pharmacy.
Middlesborough.—Messrs. Middleton & Co., Cleveland Terrace.

Ripon.—Mr. H. Bulmer Rudd, 29 Westgate.
South Lowestoft.—T. Coleman, 216 London Road.
Wigan.—A. H. Benson, 10 Darlington Street.

INFORMATION WANTED.

Will "Acetum" kindly oblige by sending his name and address?

260/19. Soluble sap green: where obtainable? [Sap-green is dried chlorophyll. Why not use paste chlorophyll?—Ed. C. & D.]

254/60. Jvara-hari, a Japanese or Indian medicine for hay-fever: where obtainable?

257/64. Who is the maker of the filter-paper folder of French origin?

260/67. Where can Loh's polishing-paste be obtained?

The Refuse in Cider-making—248/71. *One of Our Oldest Subscribers* writes:—"A cider-merchant has 'several tons of what is termed "must," the refuse or, as chemists would say, the 'marc' after the juice has been expressed. There is some difficulty as to the disposal of this marc. I have suggested that after every expression a uniform admixture of lime and soot to the apple remains would in course of time, with repeated turnings, form a good manure. Can you, or any of your readers, give an opinion?"

NOTE.—We are unable to find room this week for several pages of letters and replies to queries which are in type. We hope to print them next week.

Next Week.

Monday, February 3

Society of Chemical Industry (London Section), Chemical Society's Rooms, Burlington House, at 8 P.M. "Manufacture of Linoleum," by Mr. W. F. Reid, F.I.C., F.C.S. *Society of Arts*, John Street, Adelphi, London, W.C. "Alternate Current Transformers," Cantor Lecture, by Dr. J. A. Fleming, F.R.S. At 8 P.M.

Tuesday, February 4.

Royal Institution of Great Britain, at 3 P.M. Professor Charles Stewart on "The External Covering of Plants and Animals: Its Structure and Functions."

Wednesday, February 5.

Brighton Junior Association of Pharmacy. Social meeting.

Society of Chemical Industry (Nottingham Section), at the Mechanics' Institution, the Wardwick, Derby, at 7.30 P.M. Mr. L. Archbutt, F.I.C., will read: (1) "Note on the Ignition of Sawdust by Nitric Acid"; (2) "Note on the Influence of Atmospheric Temperatures on the Pressure of Ether and other Volatile Liquids in Closed Vessels"; (3) "Note on a Device for Checking Loss of Iodine by Evaporation in Hübl's Test."

Society of Arts, John Street, Adelphi, London, W.C. "The Mexican Drainage Canal," by Mr. F. H. Cheeswright. At 8 P.M.

Thursday, February 6.

Chemists' Assistants' Association, 103 Great Russell Street, W.C. At 8.30 Mr. J. Ince will read his paper on "British and Foreign Syrups," instead of on April 16, the date originally fixed.

Liverpool Pharmaceutical Students' Society, at 8.30 P.M. Mr. W. A. Cockshott on "Aquatic Plants"; Mr. H. B. Morgan on "Quacks and Quackery," illustrated with songs by Messrs. Woods and Morgan.

Chemical Society, Burlington House, at 8 P.M. "The Molecular Weight and Formula of Phosphoric Anhydride and of Meta-phosphoric Acid," by Professor Tilden, F.R.S., and R. E. Barnett; "Lead Tetracetate and the Plumbic Salts," by A. Hutchinson, M.A., Ph.D., and W. Pollard, B.A., Ph.D.; "An Improved Mode of Determining Urea by the Hypobromite Process," by A. H. Allen; "An Examination of the Products obtained by the Dry Distillation of Bran with Lime," by W. F. Laycock, Ph.D.; "Lateolin," by A. G. Perkin.

Friday, February 7.

Aberdeen Junior Chemists' Association, at 9.30 P.M. Social evening.

Edinburgh Chemists', Assistants', and Apprentices' Association, 36 York Place, at 9.15 P.M. "Flame Tests" (with practical demonstration), by Mr. George Coull, B.Sc.